The LADIES *Diary:*

OR, THE

Woman's ALMANACK,

For the YEAR of our LORD, 1740.

Being the *BISSEXTILE*, or LEAP-YEAR:

Containing many Delightful and Entertaining *Particulars*, Peculiarly Adapted for the *Use* and *Diverſion* of the

FAIR-SEX.

Being the *Thirty-Seventh* ALMANACK ever Publiſh'd of this Kind.

1. HAIL! happy LADIES of the *BRITISH* Iſle,
On whom the GRACES and the MUSES ſmile.

2. LONG had your lovely *Shape*, and matchleſs *Mein*,
The Wonder of the Neighb'ring Nations been;

3. NATURE to make your *Triumph* more compleat.
To peerleſs CHARMS has added piercing WIT.

4. NO more let *SCYTHIA* vaunt her FEMALE-HOST,
Nor their SEMIRAMIS th' *Aſſyrians* boaſt:
WIT join'd to BEAUTY, *Fame* ſhall now record,
Which lead more Captive than the Conqu'ring Sword.

Printed by *A. Wilde*, for the Company of STATIONERS. 1740.

The Account of the FASTS and FESTIVALS of the CHURCH of ENGLAND, Continued.

Following the Sundays after Easter doth succeed the Solemnity of Pentecost, so called because the 50th Day from the Resurrection of CHRIST. It is vulgarly called Whit-Sunday, or White-Sunday, from the Catechumens, who were cloathed in White, and admitted to the Sacrament of Baptism on the Eve of this Feast. But Verstegan saith, It was anciently called Wied-Sunday, that is, Sacred Sunday, for that Wied, or Whied signifies Sacred, in the Old Saxon.

Which Festival, as it was of old celebrated by the Jews, the 50th Day after the Passover, in Memory of the Divine Law promulgated on Mount Sinai; so is this 50th Day after Easter by all good Christians, to commemorate the Mission of the Holy Ghost thereon, which is the only best Interpreter of the Divine Law.

Next, is The Feast of the Holy Trinity (being the Lord's Day following) which was instituted by Gregory the IVth. who held the Episcopal Chair, Anno 827. In Honour of the Holy Trinity.

The Thursday next after, is the Festival of the Body of CHRIST, commonly called Corpus-Christi-Day, which Urban the Fourth Bishop of Rome, instituted about the Year of CHRIST 1264.

The Sundays following this of the Holy Trinity, are called after them, according to the Numerical Order whereby they succeed Trinity Sunday, until the First of Advent.

Lastly

Lastly, *The Four* Lords Days *immediately preceeding* Christmas, *called* Sundays of Advent, ab Adventu Domini in Carnem, *and were Instituted, That from the* First *of Them, until the* Nativity *of our* SAVIOUR, *our Minds might be prepar'd to a sober Life, and pious Meditation of his Birth, then approaching,* Parate Viam Domini, rectas facite Semitas DEI nostri.

And These are all the Moveable FEASTS.

The Fixed, *or* Stative, *are they, which, notwithstanding they fall upon divers Days of the Week, yet they do not change, but always fall upon one and the same Day of the Month, and so have a fixed and certain Seat in the* Calendar. *Of this Sort are, The* Circumcision *of* CHRIST; *The* Epiphany; *and all others the Feast of* Saints *and* Martyrs, *except the* Moveable *before recited.*

The Circumcision (*which is the First in the Order of the* Calendar) *in Commemoration of the Mystery of His Legal* Circumcision, *when He, who was the* Truth *and* Substance, *did at once fulfil, and take away the Type thereof.*

The Epiphany, *or* Apparition, *or the Feast of* Twelfth-Day *after* Christmas, *so called and celebrated in Memory and Honour of* CHRIST's *Manifestation or Apparition made to the* Gentiles, *by a miraculous Comet, or Blazing Star, by Virtue whereof He drew, and conducted the Three* Magi, *or* Sages (*commonly called the* Three Kings) *who upon Sight of that* Star *came out of the* East *into the Country of* Palestine, *or* Jewry, *to adore Him in the Manger, where, (Twelve Months after* CHRIST's *Birth) they presented him with* Myrrh, Gold *and* Frankincense, *in Testimony of his Regality, Humanity and Divinity; whereof* Prudentius,

Hic pretiosa Magi, *sub Virginis thoro* CHRISTO,
Dona ferunt Puero, Myrrhæ, *et* Thuris, *et* Auri,
Miratur Genetrix tot casti ventris honores,
Seq; Deum genuisse, Hominem, Regemq; Supremum.

Which are thus Translated by Dr. Edward Stark, *in his Primitive Devotion.*

The Wise Men *here, choice Treasures do dispense,*
To CHRIST *and* Mary, Myrrh, Gold, Frankincense,
While thus astonish'd at this Glorious Thing
A Maid at once to bear GOD, Man, *and* King.

Or, *from the Holy Ghost's appearing in the Shape of a* Dove, *at his* Baptism *Thirty Years after, (for this Sixth Day of* January *was the Day of his* Baptism) *and therefore it is also called by* Alcas Cyriacus, *an* Arabick *Manuscript of Astronomical Tables in the Arch-Bishop's Archives in the* Oxford *Library (as the Learned Doctor* Hammond *says) The Feast of*

Epiphany

Epiphany; or, Benediction of Waters: The Vigil whereof was of Old, called Vigilia Luminum, and the Ancients were wont to send Lights one to another.

This Day was anciently celebrated by the Romans in Honour of Augustus Cæsar, for the Conquest of Parthia, Egypt, and Media, which were thereupon added to the Roman Empire; whereof the Church, willing to change that Solemnity for a Better, instituted This of Epiphany in the room of it.

The Testification of his True Incarnation, was by the Feast of the Purification of the Blessed Virgin, when JESUS CHRIST was Presented in the Temple, and Proclaimed by Simeon and Anna to be the Messiah. This Feast was Instituted by Justinian the Emperor, Anno CHRISTI 542.

Saint MATTHIAS, who, being One of the Seventy Disciples, was (after the Ascension) Chosen Apostle by Lot, in the Room of Judas the Traytor: He Preached the Gospel in Macedonia, and (coming afterwards into Judea) was there Stoned, by the Jews, and then Beheaded after the Roman Manner, Anno Christi 51.

The Feast of the Annunciation of the Blessed Virgin, is kept in Remembrance of the Time when the Angel Gabriel declared our SAVIOUR's Conception, or Incarnation by the Holy Ghost.

Saint MARK the Evangelist, who Penn'd the Life, Acts, Miracles, Death and Resurrection of our SAVIOUR: He was first Bishop of Alexandria, where he Preached the Gospel, and so all over the Bordering Regions from Egypt to Pentapolis. At the same Alexandria in the Time of Trajan, he had a Cable-Rope tied about his Neck, by which he was drawn from the Place called Bucolus, unto that other called Auger, where he was Burnt to Ashes by the furious Idolaters (against whom he Preached) Anno Christi 63. and Buried at Bucolus.

[To be Continued in our next DIARY.]

N. B. Having in the Second Part of this DIARY taken so much Space for Answers to Ænigma's, and Questions, I had no Room for an Errata Emendata, &c. The Catalogue was abridged, and several Curious Things, some whereof shall be in our Next.

ADVERTISEMENT.

All Persons who are pleased to be CONTRIBUTORS by Answering the ÆNIGMA'S, QUESTIONS, &c. in this DIARY; or by sending New Enigma's, Questions, Paradoxes, or other Subjects fitting for this WORK, are desired to send their Solutions with them before the End of May 1740. Directed for the Author at Mr. Simpson's, at Stationers-Hall, LONDON. [Post Paid.]

Full Moon, the 2d day, at 11 at Night.
Laſt Quarter, the 9th day, at 2 in the Morning.
New Moon, the 17th day, at 8 at Night.
Firſt Quarter, the 24th day, at 3 in the Afternoon.

T	Circumciſion; or, NEW-YEAR's DAY.	6 M 42
W	Sun riſeth 4 min. after 8, ſets 56 m. after 3 o' Clo	7 43
T	Days Increas'd, and Nights ſhortened, 30 min.	☾ riſes
F	Sun riſes 3 min after 8, ſets 57 min. after 3.	5 A 43
S	*Good Clocks and Wat. ſhould be 10 m. faſter than the* ☉	6 45
	Sunday after Chriſtmas. Epiphany.	7 51
M	Day 8 hours long, Night 16 hours long.	8 58
T	Sun riſes at 8. ſets at 4. Day break 39 min. after 5	0 5
W	*According to the Equation of Natural days, good Pen-*	11 13
T	*dulums ſhould be 12 min. before Sun-dials.*	Morn.
F	Sun riſes 54 min after 7. ſets 6 minutes after 4.	0 23
S	*Planetary Hour by day 42 min. by night 78 min.*	1 35
	Sunday after Epiphany.	2 52
M	*Hilary.* **Marriage comes in.**	4 8
T	**Oxford** Hilary and **Cambridge** Lent-Term beg.	5 24
W	*Watches 13 min. too faſt.* ☉ due *Eaſt* at 5 morn	6 31
T	Sun riſes 3 quarters after 7, ſets 1 quarter after 4	7 26
F	*Watches and Clocks 13 min. 3 quarters too faſt.*	☽ ſets
S	Days increaſed and Nights ſhortned 1 ho. 20 min.	6 A 52
	Sunday after Epiphany. Prince WALES Born.	8 16
M	Octab Hill. 1 Ret. Sun riſes 38 min: after 7. ſets	9 34
T	Day breaks half an hour after 5. [22 min. aft. 4	10 50
W	Hilary Term begins.	Morn.
T	Sun riſes half an hour after 7. Sets half an ho. aft 4	0 4
F	St. Paul's Converſion.	1 17
S	Twilight ends 37 min. after 6.	2 26
	Sund after Epiphany. Day breaks 23 m. aft. 5	3 31
M	Quind Hill 2 Return. *Watches 14 m. 3 quar. too faſt*	4 31
T	Day 9 hours 19 min. long. Night 14 ho. 41 min	5 24
W	K. Charles II. Martyr'd. 1648-9, at White Hall	6 10
T	12 minutes paſt 2 Clock aft. Noon. 91 Years ſince.	6 48

An Account of the Weather as happen'd laſt Year, from *June* 1738, to *June* 1739. Froſt, 1, 3. Rainy days, 2, 8, 9, 12, 19, 21, 22, 23, 24, 25, 26, 28, 30. Wind, 1, 3, 5, 7, 8, 11, 12, 13, 14, 19, 25, 29, 31. Barom 28, 8, 28, 4, 29, 7, 29, 7 29, 3 28, 5, 29. 3.

Full Moon, the 1st day, at in 6 Evening.
Last Quarter, the 9th day, at 3 Afternoon,
New Moon, the 16th day, at 6 in Morning.
First Quarter, the 23d day, at 7 in Morning.

M. D's.	W. D's.	Sundays, Holy-Days, Remarkable Days, Eclipses, Sun-Riting and Sun-Setting, Length of Days and Nights. Regulation of Clocks, Terms, Day-break, Twilight, Planetary Hours, &c.	Moon's rising from the Full to the Change, and setting from the New
1	F	Sun rises 1 quarter after 7, sets 3 quarters aft. 4.	☌ ri
2	S	Purification; or, Candlemas-Day.	5 A
3	F	Septuagesima. Quomodo.	6
4	M	Craft. Purif. 3 Returns. **Marriage goes out.**	7
5	T	Sun rises 9 min. after 7, sets 51 min. after 4.	9
6	W	Day breaks 8 min. after 5.	10
7	T	Days increas'd 2 hours and an half.	11
8	F	*Watches and Clocks* 14 *min. and half too fast.*	Morn
9	S	Sun rises at 7, and sets at 5. Day 10. ho. Ni. 14 h. lo.	0
10	F	Sexagesima.	1
11	M	Octab. Pur. 4 Return.	3
12	T	Term Ends.	4
13	W	*Planetary hour by day* 51 *min.*	5
14	T	Day breaks at 52 m. aft. 4. Twilight ends 8 m. af. 7	6
15	F	*Valentine.* Day Increas'd 2 hours.	☽ se
16	S	Sun rises 3 quarters after 6. sets 1 quarter aft. 5.	5 A
17	F	Quinquagesima; or Shrove-Sunday.	7
18	M	Sun rises 3 quarters after 6, sets 1 quart. after 5.	8
19	T	Shrove-Tuesday.	9
20	W	Ash-Wednesday, the first Day of Lent.	11
21	T	**Cambridge Commencement** for Batc. of Arts.	Morn
22	F	Princess MARIA Born.	0
23	S	Sun rises half an hour after 6, sets half an ho. aft. 5.	1
24	F	Quadragesima. 1 Sunday in Lent. Invocavit.	2
25	M	St. Matthias. Day increas'd 3 ho. 3 quarters.	3
26	T	*Watches* 11 *min. 1 quarter too fast.*	4
27	W	Ember-Week. *Planetary hour by day* 55 *min.*	4
28	T	Sun rises 23 min after 6, set 37 min. after 5.	5
29	F	Day 11 ho. 18 min. long. Night 12 ho. 32 min.	5

Weather in *February*, 1739. Rain, 1, 5, 8, 9. 10, 11, 1[illegible] 18, 20, 21, 26. Snow, 5, 6, 7, 28. Frosty days, 23. Wi[illegible] 3, 4, 10, 11, 12, 13, 14, 16, 17, 18, 20, 25, 26. Warm 11, 13. 23, Thunder. A very Wet Season, and great floods.

Full Moon, the 2d day, at Noon.
Laſt Quarter, the 9th day, at Midnight.
New Moon, the 16th day, at in the Afternoon.
Firſt Quarter, the 24th day, at 1 in the Morning.

S	St. *David.*	9	M 16
S	2 Sunday in Lent; Reminiſcere. *Chad.*	☾	riſes
M	Sun riſes 15 min. after 6, ſets 3 quart after 5.	6	♐ 56
T	*Planetary, or Jewiſh hours. 58 min. long.*	8	♑
W	Day breaks 8 min. after 4	9	18
T	Day 11 ho. 48 min. long. Night 12 ho. 12 min.	10	30
F	*Watches and Clocks 8 min. and half too faſt.*	11	44
S	*Cyprian.* Day and Night equal, or 12 ho. long	Morn	
S	3 Sunday in Lent; Oculi mei Semper ad Dom.	0	58
M	☉ in ♈ 9th day, at 4 h. 37 m. P.M. [and riſes and	2	6
T	*Watches 7 minutes too faſt.* [ſets at 6.	3	9
W	Sun riſes 6 min. before 6, and ſets 6 min. after 6.	4	0
T	Day increaſed 4 hours 53 min.	4	42
F	Prince EDWARD Born. Day break 3 qu. aft. 3	5	14
S	Sun riſes 3 quart. after 5, ſets 1 quart. after 8.	5	43
S	4 Sunday in Lent; Lætare cum. Jeruſal.	☽	ſets
M	St. *Patrick.* Day 12 hours 32 min. long.	7	♐ 29
T	Day breaks 35 min. after 3. *Watches 5 min. too faſt.*	8	48
W	Sun riſes 40 min. after 5 ſets 20 min. after 6.	10	4
T	**Cambridge** latter Act. *Cuthbert.*	11	17
F	Day br. 3 h. 37. Day 12th h. 50 m. N. 11 h 10. m lo.	Morn	
S	Days increaſed 5 hours and a half.	0	23
S	5 Sunday in Lent; Judica. *Planetary hour 64 min.*	1	24
M	Sun riſes half an ho. after 5, ſets half an ho. aft. 6.	2	17
T	Annunciation V. Mary; LADY-DAY.	3	0
W	☉ riſes at 5, 25, ſets at 6. 35. Day 13 h. 10 m. long	3	35
T	*Watches and Clocks 2 minutes before Sun-dials.*	4	5
F	Day break 9 min after 3. Twilight ends 8. 51.	4	31
S	**Oxford** and **Cambridge** Terms end.	4	51
S	6 Sunday in Lent, Palm-Sund. Dominica Mag.	5	10
M	Sun riſes 1 quarter after 5, ſets 3 quarters after 6.	☾	riſes

Weather in *March*, 1739. Rain, 5, 6, 7, 14, 21, 30, 31. Snow, 11, 15 Snow'd 24 hours 17. Froſt, 1, 2, 12, 13, 16, 17, 18, 21. Wind, 6, 7, 8, 9, 10, 11, 12, 14, 15, 16, 17, 25. Warm, 14, 21, 23, 31. Barom heighth, 29, 6, 29, 8, 29, 2, 28, 8, 28, 8, 29, 3, 29, 8.

Full Moon, the 1st day, at 5 in the Morning
Last Quarter, the 8th day, at 7 in the Morning.
New Moon, the 15th day, at 2 in the Morning.
First Quarter, the 22d. day, at 8 in the Evening.
Full Moon, the 30th day, at 3 in the Afternoon.

1	T	All-Fools-day. Day 13 hours 34 min. long.	7	A 1
2	W	Sun rises 11 min. after 5. sets 49 min. after 6.	8	3
3	T	*Maundy Thursday.*	9	4
4	F	Good-Friday. Our SAVIOUR's Crucifixion.	10	5
5	S	*Good Clocks, Watches and Sun-dials, should go together*	Morn.	
6	E	EASTER-DAY. Our SAVIOUR's Resurrection	0	
7	M	Easter-Monday	1	1
8	T	Easter-Tuesday.	2	
9	W	*Watches have lost 1 minute of the Sun, he being swifter*	2	5
10	T	*Planetary hour by Day 71 minutes long.*	3	2
11	F	Sun rises 54 min. after 4, sets 6 min. after 7.	3	5
12	S	**Marriage comes in.**	4	1
13	E	1 Sunday after Easter; Low-Sunday. Quasimodo.	4	3
14	M	Day 14 hours half long. Night 9 hours and an half.	4	5
15	T	Prince WILLIAM Born.	☽	set
16	W	**Oxford** and **Cambridge** Term begins.	9	A
17	T	Day break at 4 min. aft. 2. Twilight ends 56 m. 9.	10	1
18	F	*Watches 3 minutes too slow.*	11	1
19	S	Sun rises 39 min. after 4, sets 21 min. after 7.	Morn.	
20	E	2 Sunday after Easter; Misericordia.	0	1
21	M	Quind. Pasch. 1 Ret.	1	
22	T	*Planetary hour* 1 14. Day increas'd 7 ho. 31 min	1	4
23	W	Easter Term beg. St. George, Cha. and Fort.	2	1
24	T	Sun rises half an ho. aft. 4. sets half an ho. aft. 7.	2	3
25	F	St. Mark, Evangelist.	3	
26	S	Days 15 ho. 6 min. long. Lengthen'd 7 ho. 44 m	3	2
27	E	3 Sunday after Easter. Jubilate.	3	3
28	M	Tres. Pasch. 2 Ret. Day break 19 min. after 1.	3	5
29	T	*Watches too slow 4 minutes.*	4	1
30	W	Sun rises 20 min. after 4, sets 40 min. after 7.	☾	rise

Weather in *April* 1739. Rain, 1, 2, 7, 8, 12, 13, 16, 22, 23, 24, 25, 30. Windy, 1, 2, 3, 4, 5 8, 9, 10, 20, 21, 22, 23. 29. Snow, 4, 22 Very cold from, 4, to 11 Extream cold, 21. Warm, 11. Barom. 29, 4, 29, 3 29, 2, 29, 4, 29, 2, 28, 9, 29, 1.

Laſt Quarter the 7th day, at 1 in the Afternoon.
New Moon, the 14th day, at 2 in the Afternoon.
Firſt Quarter, the 22d day, at 2 in the Afternoon.
Full Moon, the 30th day, at 1 in the Morning

1	T	St. Philip and Jacob. *Watches 4 min too ſlow.*	8	A 49
2	F	Day breaks at 1. Twilight ends at 11.	10	2
3	S	Sun riſes 1 quarter after 4, ſets 3 quarters after 7	11	11
4	E	4 Sunday after Eaſter. Cantate.	Morn.	
5	M	Mens Paſch. 3 Returns. **Weſtminſter** Election.	0	8
6	T	**Day** increas'd, and Night ſhorten'd 8 h. 1 quart.	0	54
7	W	Sun riſes 9 min. after 4, ſets 51 min. after 7.	1	30
8	T	Day 15 ho. 44 min. long. Night 8 ho. 16 m. long.	2	0
9	F	*Watches and Clocks 4 min. too ſlow.*	2	24
10	S	**Marriage goes out.**	2	46
11	E	Rogation Sunday. 5 Sund. after Eaſter. Jucundit.	3	6
12	M	Rogation-Week. Quind. Paſch. 4 Return.	3	27
13	T	No real Night, but Twilight till 14th of *July*.	3	47
14	W	Sun riſes at 4, ſets at 8. Day 16 ho. Ni. 8 ho. long	☽	ſets
15	T	Holy-Thurſday; or CHRIST's Aſcenſion.	9	A 5
16	F	Craſt. Aſcen. 5 Returns. *Wa. 3m and an half too ſlow.*	10	5
17	S	Sun riſes 4 min. before 4, ſets 4 min. after 8.	10	56
18	E	6 Sunday after Eaſter. Exaudi.	11	38
19	M	Eaſter Term ends. *Dunſtan.*	Morn.	
20	T	*Watches 3 minutes ſlower than the Sun.*	0	13
21	W	Sun riſes 52 min. after 3, ſets 8 min after.	0	41
22	T	**Oxford** and **Cambridge** Term ends.	1	5
23	F	Days 16 ho. 20 m. Night. 7 ho. 40 min. long.	1	27
24	S	Days increas'd 9 hours. Prince GEORGE Born.	1	44
25	E	WHIT-SUNDAY, or the Deſcent of the Holy Ghoſt.	2	0
26	M	*Auguſtine. Watches 2 min. 1 quarter too ſlow.*	2	18
27	T	Sun riſes 3 quart. aft. 3, ſets 1 quart. after 8.	2	39
28	W	Ember-Week	3	2
29	T	K. CHARLES II. Birth and Return 1660.	3	32
30	F	Princeſſes AMELIA and CAROLINE Born.	☾	riſes
31	S	Sun riſes 3 quart. after 3, ſets 1 quart. after 8	9	A 57

Weather in *May*, 1739.

Hot, 6, 7, 8, 9, 13, 19, 20, 21, 22, 23, 25, 26.
Sultry, 15, 20, 21, 22, 23. Thunder, 20, 22.
Rain, 2, 3, 4, 5, 7, 8, 10, 11, 12 Barom. 29, 7, 29, 1, 29, 0, 29, 4, 29, 5, 29, 7, 29, 6.

Last Quarter, the 5th day, at 3 in the Afternoon.
New Moon, the 13th day, at 6 in the Morning.
First Quarter, the 21st day, at 6 in the Morning.
Full Moon, the 28th day, at 9 in the Morning.

1	E	Trinity Sunday. **Marriage comes in.**	10 A 5
2	M	Craft Trin 1 Return. **Trin. Col. Oxon.** Elect.	11 2
3	T	Sun rises 43 min after 3. sets 17 min after 8.	12 (
4	W	**Oxford** Trinity Term begins.	Morn
5	T	*Corpus* CHRISTI Day	0 2
6	F	Trinity Term begins. *Now good Clocks and Watches*	0 4
7	S	[*should go exactly with the Sun*	1 8
8	E	1 Sund. aft. Trin { The ☉ rises about a 5th part	1 2
9	M	Octab. Trin. 2 Ret { of a min. earlier *per* Day.	1 4
10	T	☉ in ♋ 2 h 39 P.M. Sun rises 42 min after 3 sets	2 11
11	W	K. GEORGE II. Inaug. St. Barnab. [18 m. aft. 8	2 3
12	T	{ *The Sun being slow in his Motion, Watches have*	3 14
13	F	{ *gain'd 1 min. and a half of the Sun, in 7 days.*	) sets
14	S	Sun rises 43 min. after 3. Days shortened 2 min	9 A 3
15	E	K. GEORGE II. proclaim'd. 2 Sund after Trin	10
16	M	Quind. Trin 3 Return. Day 16 ho. 34 min. long	10 28
17	T	*Watches and Clocks too fast 2 min. and an half*	11 2
18	W	Sun rises 44 min. after 4, sets 16 min after 8.	11 24
19	T	Day 16 ho. 32 min. long. Days shortned 8 min	12 4
20	F	*Watches 3 min too fast.*	12 (
21	S	Sun rises 45 min. after 3, sets 15 min. after 8.	Morn
22	E	3 Sunday after Trinity. Day 16 ho. and an half lo.	0 1
23	M	Tres Trin. 4 Ret.	0 3
24	T	St. John Baptist; Midsummer-day.	0 5
25	W	Term ends. **St. John's College** Election.	1 24
26	T	*Watches 4 minutes too fast.*	1 5
27	F	Day 16 hours 20 min. long, shortned 16 min.	2 4
28	S	Sun rises 10 min before 4, sets 10 min. after 8.	3 3
29	E	4 Sunday after Trinity. St. Peter and Paul.	(rises
30	M	**Exeter College**, Election.	9 A 5
		Watches 4 min and half too fast.	

Weather in *June* 1739.

Rain, 1, 2, 5, 6, 7, 8, 10, 11, 12, 13, 16, 17, 19, 20, 21, 22, 23, 26. 27, 28. Hot, 4, 29 Thunder, 17. Wind, 2, 3, 12, 21. 25. Birom. 29, 5, 29, 6, 29, 3, 29, 2, 29, 4, 29, 5, 29, 3, 29, 3, 29, 3, 29, 4.

Last Quarter, the 5th day, at 1 in Morning.
New Moon, the 12th day, at 5 in the Afternoon.
First Quarter, the 20th day, at 8 in the Evening.
Full Moon, the 27th day, at 4 in the Afternoon.

1	T	**Cambridge Commencement.**	10	A 25
2	W	*Visitat. Mary.* Sun rises 54 min. aft. 3, sets 6 m aft. 8	10	49
3	T	Day 16 ho. 10 min. long Night 7 ho. 50 min.	11	9
4	F	*Planetary h. by day* 81 *min* Sun due *East* at 7 h. 9 m	11	30
5	S	*Watches and Clocks shou'd have gain'd* 5 *min.* 10 *see*	11	50
6	E	5 Sunday after Trinity.	Morn.	
7	M	*Thomas à Becket.*	0	13
8	T	**Oxford Act** 7 days before the Term Ends.	0	38
9	W	Sun rises at 4, sets at 8. Day 16 ho. Night 8 ho	1	10
10	T	*Watches* 5 *min. and an half too fast.*	1	49
11	F	*Now there begins to be some night again, the Sun be-*	2	36
12	S	**Oxford** Term Ends. [*ing at midn.* 18 *d. bel. Hori.*	3	31
13	E	6 Sunday after Trinity.	☽	sets
14	M	Sun rises 9 min. after 4, sets 51 min. after 7.	9	A 4
15	T	*Swithin.*	9	26
16	W	*Watches* 5 *min* 3 *quart. too fast.* Day break at 12.27	9	46
17	T	Day 15 ho. 34 min. long shortned 1 ho. 2 min.	10	3
18	F	Sun rises 1 quart. after 4. sets 3 quart. after 7.	10	18
19	S	Dog-days beg. *Syrius* the Dog-Star rises with the ☉.	10	37
20	E	7 Sunday after Trinity. Day breaks at 1.	10	58
21	M	*Plan ho.* 1 *ho.* 16 *m.* Days shortned 1 ho. 13 m.	11	22
22	T	*Magdalen.*	11	50
23	W	Sun rises 22 min. after 4, sets 37 after 7.	Morn	
24	T	**Magdalen College** Election.	0	26
25	F	St. James, Apostle. *Watches too fast* 5 *min.*	1	15
26	S	Day breaks 16 min. after 1 a-clock.	2	2
27	E	8 Sunday after Trinity.	3	36
28	M	Sun rises half an ho. aft 4, sets, half an ho. after 7.	☾	rises
29	T		8	A 5
30	W	Day shortned 1 hour 3 quarters.	9	13
31	T	Princess AUGUSTA Born	9	33

Weather in *July*, 1738, last past, before the Writing of this DIARY. Rain, 5, 8, 9, 11, 12, 14, 20, 28, 29. Wind, 5, 8, 9, 10, 12, 13, 16, 18, 19, 21, 23, 24, 27, 28. 29. Sultry, 1, 2, 3, 6, 17, 18, 19, 24, 27, 30. Thu 9, 25. Barom. 29, 7, 29, 6, 29. 5, 29, 4, 29, 7.

Last Quarter, the 3d day, at 9 in the Morning.
New Moon, the 11th day, at 9 in the Morning.
First Quarter the 19th day, at 8 in the Morning.
Full Moon, the 25th day, at Midnight.

1	F	Lammas-Day. *Clocks and Watches 4 min. ½ too fast.*	9 A	56
2	S	Day breaks at 2 a-clock. Days shorten'd 2 hours.	10	18
3	E	9 Sunday after Trinity.	10	44
4	M	Sun rises 3 quarters after 4, sets 1 quarter after 7.	11	14
5	T	Day 14 ho. and an half long. Night 9 ho. and half	11	50
6	W	Day breaks 1 qu. after 2. Twil. ends at 9 and half	Morn.	
7	T	*Good Pendulum Clocks and Watches, should be*	0	34
8	F	*3m in. and an half faster than the Sun.*	1	27
9	S	Sun rises at 53 min. after 4, sets 7 min. after 7.	2	26
10	E	10 Sunday after Trinity. *Lawrence.*	3	31
11	M	*Planetary hour 70 minutes.* Sun due *East* at 6. 38.	☽	sets
12	T	Sun rises at 5, sets at 7. Day 14, Night 10 h. long	7 A	56
13	W	*Watches too slow 2 min.*	8	14
14	T	Days shorten'd 2 hours 3 quarters.	8	30
15	F	Sun rises 5 min. after 5, sets 5 min. before 7.	8	48
16	S	Day 13 hours, 46 min. long.	9	8
17	E	11 Sunday after Trinity.	9	29
18	M	Day breaks 52 min. after 2. *Planetary hour 68 min.*	9	54
19	T	*Good Watches and Clocks shou'd keep Time exactly*	10	27
20	W	*with the Sun, his Motion now being more swift.*	11	9
21	T	Sun rises 1 quarter after 5, sets 3 quarters after 6.	Morn.	
22	F	Day 13 h and half long. Night 10 ho. and half long.	0	4
23	S	*Pendulums have lost 1 min. of the Sun.*	1	20
24	E	12 Sunday after Trinity. St. Bartholomew.	2	39
25	M	Day breaks 13 min. aft 3. *Planetary hour 66 min.*	4	3
26	T	*Watches 2 min. too slow.*	☾	rises
27	W	Dog-days end. *Syrius* rises at 3 in the morning.	7 A	45
28	T	Sun rises half an ho. after 5, sets half an ho. after 6.	8	5
29	F	*The Crepusculum, or Twilight's ending is when the*	8	29
30	S	*Sun is got full 18 Degrees below our Horizo*	8	54
31	E	13 Sunday after Trinity. *Watc. 3 m. and ½ too slow.*	9	22

Weather in *August* 1738. Rain, 1, 5, 6, 9, 10, 11, 14, 15, 17, 18, 19, 21, 22, 23, 24, 25. Wind, 1, 2, 3, 4, 8, 13, 14, 15, 20, 21, 24. Hot, 1, 7, 25, 29, 30, 31. The height of the Barom. every 4 days, 29, 6, 29, 4 29, 3, 29, 4, 29, 5, 29, 3, 29, 4, 29, 5, 29, 6.

Laſt Quarter, the 1ſt day, at 9 at Night.
New Moon, the 10th day, at 1 in the Morning.
Firſt Quarter, the 17th day, at 6 in the Evening.
Full Moon, the 24th day, at 9 in the Morning.

1	M	Sun riſes 38 min. after 5, ſets 22 after 6.	9 A	57
2	T	LONDON Burnt, 1666.	10	40
3	W	*Watches 4 minutes too faſt.*	11	30
4	T	Day breaks 3 qu. aft. 3. Twi-light ends at 8 1 qu.	Morn.	
5	F	Sun riſes 3 quarters after 5, ſets 1 quarter after 6	0	26
6	S	Day 12 ho. and an half long. Days ſhort. 4 ho. 1 qu.	1	29
7	S	14 Sunday after Trinity.	2	34
8	M	*Watches and Clocks ſhould be 6 m. and ½ aſt. the Sun.*	3	41
9	T	Day breaks at 50 min. after. 3.	4	47
10	W	Days ſhorten'd 4 hours and an half	☽	ſets
11	T	Equal Day and Night in all the *Habitable* World.	7 A	3
12	F	☉ in ♎ 11 day at 6 h. 16 m P.M. Sun riſes & ſe. at 6.	7	23
13	S	*Watches 8 min. too ſlow. Planetary hour 58 mim.*	7	44
14	S	15 Sunday after Trinity.	8	6
15	M	Sun riſes 7 min. after 6, ſets 53 min. after 5.	8	36
16	T	Day break 38 min. after 4 *Watches too ſlow 9 min.*	9	13
17	W	Ember-Week.	10	3
18	T	Day 11 ho. and half long. Night 12 ho. and half.	11	6
19	F	Sun riſes 1 quart. after 6, ſets 1 quart. before 6	Morn	
20	S	*Watches to ſlow 10 minutes.*	0	20
21	S	16 Sunday after Trinity. St. Matthew.	1	41
22	M	*Planetary hour 56 min. Sun due Eaſt 5 hours 48 m*	3	9
23	T	Day breaks 25 min after 4.	4	34
24	W	*Watches too ſlow 11 min. 1 quarter.*	5	59
25	T	Day 11 hours, Night 13 Hours long.	☾	riſes
26	F	Sun riſes half an ho. after 6, ſets half an ho bef. 6.	7 A	1
27	S	*Watches too ſlow 12 min.* Day breaks 34 m. after 4	7	28
28	S	17 Sunday after Trinity.	8	1
29	M	St. Michael, the Arch-Angel.	8	41
30	T	Sun riſes 37 min. after 6, ſets 23 min. after 5	9	28

Weather in *September* 1738. Rain, 2, 3, 4, 7, 8, 10, 11, 14, 15, 18. Wind, 1, 4, 6, 7, 8, 9, 10, 11, 18, 19, 29. A Charming fine ſeaſon from 18 to 26 like Summer. Ba. 29, 5, 29, 4, 29, 3, 29, 7, 29, 5, 29, 4, 26, 6, 29, 5, 29, 7.

Laſt Quarter, the 1ſt day, at 1 in the Afternoon.
New Moon, the 9th day, at 5 in the Afternoon.
Firſt Quarter, the 17th day, at 2 in the Morning.
Full Moon, the 23d day, at 8 at Night.
Laſt Quarter, the 31ſt day, at 9 in the Morning.

1	W	*Watches* 13 *minutes and* 1 *quarter too ſlow.*	10 A	24
2	T	Day 10 ho. and half long. Night 13 ho. and half.	11	26
3	F	Sun riſes 3 quarters after 6, ſets 1 quarter after 5	Morn	
4	S	*Good Pendulums will be* 14 *min. ſlower than the Sun.*	0	31
5	♄	18 Sunday after Trinity.	1	38
6	M	Days ſhorten'd 6 hours and a quarter.	2	45
7	T	Day 10 ho. 16 min. long. Night 13 ho. 44 min.	3	52
8	W	Sun riſes 6 minutes before 7, ſets 6 min. after 5.	4	56
9	T	*Dennis.* Day breaks at 5 a-Clock.	6	4
10	F	**Oxford** and **Cambridge** Terms Begin.	☽	ſets
11	S	K. GEORGE II. Crown'd. *Watc.* 15 *min. too ſlow*	6 A	16
12	E	19 Sunday after Trinity. Sun riſes at 7, ſets at 5.	6	43
13	M	*According to the Equation of Natural Days, good*	7	20
14	T	*Pendulums Cl. & Wat. ſhould be* 15 *m. aſt. the* ☉	8	5
15	W	Day breaks 8 m aſt. 5.	9	0
16	T	Sun due *Eaſt* 5 ho. 19 min *Planetary hour* 48 *min*	10	9
17	F	Day breaks at 11 min. aft. 5 *Watc. too faſt* 14 *m.*	11	26
18	S	St. Luke, Evangeliſt. Day 9 ho and half long.	Morn	
19	E	20 Sunday after Trinity. Sun riſes 1 quart. aſt. 7.	0	48
20	M	Treſ Mich. 1 Return.	2	10
21	T	Day 9 ho. 22 min. long.	3	24
22	W	Princeſs of ORANGE Born.	4	58
23	T	Michaelmas Term begins.	☾	riſes
24	F	Day breaks at 22 m. aft. 5. Day ſhort. 5 ho. and ½	5 A	28
25	S	Criſpin *Watches* 16 *minutes too ſlow.*	5	59
26	E	21 Sunday after Trinity.	6	36
27	M	Menſ. Mich. 2 Return. Day 9 hours long.	7	21
28	T	St. Simon and St. Jude. Sun riſes half ho. aft. 7.	8	15
29	W	*Watches* 15 *minutes and an half too ſlow.*	9	14
30	T	K. GEORGE II. born 1683.	10	18
31	F	Sun riſes 37 min. after 7. ſets 23 min. after 4.	11	24

The Weather in *October* 1738. Rain, 4, 5, 6, 7, 12, 13, 18, 19, 21. Wind, 8, 10, 11, 12, 15, 20, 23, 24, 26. Warm days, 14, 17, 25, 26, 28, 29. Froſt 20, 17, 18. Barom. every 3d. day, 29, 7, 29, 2, 92, 5' 29, 4, 29, 0, 29, 6, 29, 5, 28, 8, 28, 9, 29, 3, 29, 7.

New Moon, the 8th day, at 9 in the Morning
First Quarter, the 15th day, at 10 in the Morning.
Full Moon, the 22d day, at 9 in the Morning
Last Quarter, the 30th day, at 6 in the Morning.

			Morn.
1	S	All Saints Day 8 hours 40 min long.	0 31
2	E	22 Sunday after Trinity. All Souls	1 38
3	M	Craft. Anim. 3 Ret. **All-Souls-Coll.** Election.	2 45
4	T	Sun rises 3 quar. after 7. sets 1 quart. after 4	3 52
5	W	Gun-powder Plot, 1605. *Watches 15 min. too slow.*	5 1
6	T	Day 8 ho. 26 min. long. Day break at 40 m. aft 5.	6 11
7	F	Day shortned 6 hours 1 quarter.	☽ sets
8	S	Sun rises 51 min. after 7, sets 9 min. after 4.	5 A 15
9	E	23 Sunday after Trinity.	5 27
10	M	*Watches 14 min. and 3 quarters too slow.*	6 53
11	T	*Martin*, Bishop. Day 8 hours 10 min long.	7 58
12	W	Craft Mart. 4 Return. Day breaks 46 min aft. 5.	9 11
13	T	*Watches 13 min. too slow.*	10 32
14	F	Days shortned 8 ho 34 min. break 50 min. aft 5.	11 53
15	S	Sun rises at 8, sets at 4. Day 8 ho. Nig. 16. ho. long	Morn.
16	E	24 Sunday after Trinity.	1 12
17	M	Day breaks 51 min after 5. *Planetary hour 40 min*	2 33
18	T	Octab. Mart. 5 Returns. *Watches 11 min. too slow*	3 54
19	W	Princess of WALES Born.	5 15
20	T	Day breaks 55 min. after 5. Day 7 ho. 48 min. lo.	6 35
21	F	*Watches too slow 10 minutes.*	☾ rises
22	S	Sun rises 9 min. after 8, sets 51 min. after 3.	5 A 2
23	E	25 Sunday after Trinity. *Clement.*	5 52
24	M	Days shortned 9 hours.	6 50
25	T	Quind Mart 6 Return. *Catherine*	8 0
26	W	Sun rises 12 min after 8, sets 48 min. after 3.	9 1
27	T	**Baliol College** Election.	10 6
28	F	Day-light begins and ends at 6 Term ends.	11 13
29	S	**Marriage goes out** *Watc 6 min. 3 qu too slow.*	12 19
30	E	Advent-Sunday. St. Andrew, Apostle.	

Weather in *November* 1738. Rain, 19, 26, 27 Wind, 8, 10, 17, 18, 19, 21, 22, 25, 28, 29, 30 Tempestuous 25. Frost, 4, 20, 12, 17. Warm. 1, 2, 12, 13, 14, 15, 18, 30. Barom. 19, 5, 29, 7, 29, 5, 29, 5, 29, 7, 28, 9, 29, 2, 29, 3, 29, 1

New Moon, the 7th day, at 11 at Night.
First Quarter, the 14th day, at 7 in the Evening.
Full Moon, the 21ſt day, at Midnight.
Laſt Quarter, the 30th day, at 3 Morning [T. Cowper

1	M	Sun riſes 16 min. after 8, ſets 44 min. after 3.	Mor
2	T	Day 7 hours 28 min. long. Night 16 hours 32 min.	1
3	W	Day breaks 2 min. aft. 6 a-Clock. *Wate. 4 min. ½ ſlow*	2
4	T	Day ſhortened 9 hour 1 quarter.	3
5	F	Sun riſes 17 min. after 8, ſets 43 min. after 3.	4
6	S	*Planetary hour by Day 37 min. by Night 83 min.*	6
7	E	2 Sunday in Advent. Princeſs LOUISA Born	7
8	M	*Watches 2 min. and a half too ſlow.*	D ſe
9	T	The greateſt ſhortning of the Days is 9 ho. 12 min.	5A
10	W	Sun riſes at *Coventry* 18 min after 8, ſets 42 m. }	6
11	T	after 3. Shorteſt day, 7 hours 24 min. long. }	8
12	F	Day breaks 3 min after 6	9
13	S	*Now good Clocks, Watches, and Sun-dials go together*	10
14	E	3 Sunday in Advent.	Morn
15	M	Sun riſes 17 min. after 8, ſets 43 min. after 3.	0
16	T	*O Sapientia.* Day increaſed 2 minutes.	1
17	W	Ember-Week. **Oxford** and **Cambridge** Terms End	2
18	T	*Now good Pendulums have gain'd 3 min. in 6 days.*	4
19	F	Day 7 hours and an half long.	5
20	S	Sun riſes 1 quarter after 8, ſets 3 quarters after 3.	6
21	E	4 Sunday in Advent. St. Thomas. Moon Eclips'd.	7
22	M	Day Increas'd 8 min. Day breaks at 6 a-clock.	☾ rife
23	T	Sun riſes 13 min. after 8, ſets 47 min. after 3.	5 A
24	W	Day 7 hours 34 min. long.	6
25	T	CHRIST-MAS-DAY.	7
26	F	St. Stephen, Proto-Martyr.	8
27	S	St. John, Evangeliſt.	9
28	E	1 Sunday after Chriſtmas. Innocents.	10
29	M	*Watches and Clocks 8 minutes too faſt.*	Morn
30	T	Sun riſes 7 min. aftet 8, ſets 53 min. after 3.	0
31	W	Day 7 hours 48 min. long. Night 16 hours 12 min.	1

Weather in *December* 1738. Rain, 3, 6, 7, 9, 11, 12, 16, 18, 25, 29. Wind, 2, 3, 6, 7, 14, 20, 21, 25, 29, 31. Froſt, 12, 13, 14, 19, 21, 22, 23, 24, 28, 30. Snow, 21, 22, 25. Warm, 2, 6, 10, 17. Barom 29, 1, 28, 8, 29, 4, 29, 9, 29, 6, 29, 3, 29, 4, 28, 9, 29, 2.

WITHIN the Sphere of the Earth's Orbit, will happen ſix Eclipſes this Year; three Times will the Moon in her wandering Courſe, interpoſe and hide the Splendor of the Sun's Rays from falling on the Earth, or its Atmoſphere: And thrice will the Earth, in her Courſe, ſo fall in a Line between the Sun and Moon, as to hinder her receiving the Light borrowed from the Sun, to enlighten the Earth by Reflection.

☽ Ecl. 2 *Jan.* 10 Night.		Beg.	Mid.	End.	Dur.	Dig.
		H M				
From *Aſtron. Car.*	*Coventry* —	VIII 34	X 28	XI 18	III 48	20 51
From Mr. *Chattock*	*London* —	8 22	10 27	12 35	4 11	21 41
Mr. *Leadbeater*	*London* —	8 30	10 25	12 20	3 50	20 29
Mr. *Peachey*	*Mildenhall*	8 9		12 5	3 56	21 0
Mr. *Bamfield*,	*Honiton* —	6 18	7 44	9 20	3 2	16 54
Mr. *May*, jun.	*London* —	8 31	10 29	12 27	3 55	
	Paris	8 41	10 39	12 37		
	Amſterdam	8 50	10 48	12 46		
	Coventry	8 27	10 25	12 23		
An Amanuenſis,	*London* —	8 32	10 26	11 18	3 50	20 30
Mr. *Robinſon*,	*Guiſbrough*	8 7	10 6	12 5	3 58	21 12
	Whitby —	8 9	10 8	12 7		
Mr. *W. Brown*,	*Cleobury* —	8 30	10 24	12 18	20 52	
	London —	8 40	10 34	12 28		
	Paris —	8 49	10 43	12 37		
	Madrid —	8 26	10 20	12 14		
Mr. *Ab. Donn*,	*London* —	8 42	10 40	12 38	3 58	22 30
	Bideford —	8 24	10 22	12 20		
	Virginia	3 42	5 40	7 38		
Friend *Montague*,	*London*	8 37	10 32	12 27	3 50	21 13
Mr. *Nic. Farrer.*	*Leadb. Tables.*	8 10	10 9	12 8	3 58	21 12
	Scien. Steta.	8 5	10 4	12 3		
		8 4	10 3	12 2		
	London —	8 31	10 25	12 20	3 49	20 29
	Sunderland	8 26	10 20	12 15		
	Morpeth	8 24	10 19	12 13		
Mr. *J. Bulman*,	*London* —	9 1	10 30	12 25	3 24	20 28
	Edenburgh	8 50	10 19	12 14		
	Dublin —	8 33	10 2	11 57		
	Carliſle	8 50	10 19	12 14		
	Deptford	9 2	10 31	12 26		
Mr. *T. Glaſpool*,	*Wincheſter*	8 27	10 22	12 17	3 50	20 28
	Aylſham	8 31	10 26	12 21		
Mr. *Jo. Taylor*, by *Aſtr. Anglica*,	*London*	8 32	10 35	12 38	4 6	21 30
	Spaith —	8 28	10 31	12 34		
	Coventry	8 26	10 29	12 32		
	Jeruſalem	11 34	13 37	15 40		
	Liverpool	8 22	10 25	12 28		
Mr. *Cuth. Carſon*,	*Lamton, Dur.*	8 29	10 22	12 16	3 46	20 31
Mr. *R. Hughs*,	*Pentreſioden*	8 34	10 27	12 21	3 47	20 30

		H. M.	H. M.	H. M.	H. M.	D. M.
Mr. *J. Wilſon*,	*Morpeth* —	8 25	10 15	12 5	3 40	21 14
Mr. *J. Hilton*,	———	8 15	10 9	12 2	3 47	20 30
Mr. *P. Pilbrow*,	———	9 0	11 5	12 54	3 54	20 30
Mr. *J. Canton*,	———	8 22	10 20	12 18	3 56	20 56
Mr. *T. Sparrow*,	*Edmundſbury*	8 32	10 27	12 22	3 50	20 27
Mr. *W. Leighton*,	*London* —	8 29	10 24	12 18	3 48	20 23
	Arlington	8 39	10 33	12 27	3 48	
Mr. *Ch. Facer*,	*Watlington*	8 34	10 30	12 26	3 52	20 50
Mr. *W. Schoolcroft* at *Hovington, Yorkſhire*, by	*Aſtr. Inſtau.*	8 17	10 23	12 28	4 10	21 37
	Aſtr. Caroli	8 36	10 30	12 24	3 47	20 51
	Scien. Stella	8 27	10 22	12 16	3 49	20 28
	Flamſt. T.	8 28	10 2[illegible]	12 23	3 55	21 5
	Leadbetter's	8 22	10 22	12 21	3 58	21 10
Mr. *J. B. Smith*,	*Oxford* ——	8 26	10 24	12 22	3 56	
Mr. *Jo. Benwell*,	*Highworth*	8 21	10 17	12 13	3 51	20 50
Mr. *Cowper*,	*Wellingborow*	8 24	10 21	12 18	3 54	20 37

2d Eclipſe is of the Sun, 17 *Jan.* at 8 at Night, inviſible to us.
3d Eclipſe of the Sun, 13 *June* at 2 in the Morning, inviſible.
4th Eclipſe of the Moon, 28 *June* at 9 in the Morning, inviſible.
5th Eclipſe of the Sun, 7 *Decemb.* at 11 at Night, and inviſible,

6th ☽ Ecl. 21 *Dec.* 11 Nig.		Beg.	Mid.	End.	Dur.	Dig.
		H. M.				
By *Aſtron. Caroline*,	*Coventry*—	X. 22	XI. 36	XII 50	II. 29	5 42
Mr. *Chattock*	*London* —	10 21	11 49	1 17	2 56	7 17
Mr. *Leadbetter*,	*London* —	10 32	11 48	1 4	2 32	5 49
Mr. *J. Peachey*,	*Mildenhall*	10 16	11 36	12 56	2 40	6 0
Mr. *S. Bamfield*,	*Honiton*	9 43	11 5	12 27	2 44	6 32
Mr. *J. May*,	*London*,	10 25	11 53	1 21		
	Amſterdam	10 44	12 12	1 40	2 56	6 33
	Peterſburg	12 26	1 54	3 22		
Annus Amanuen.	*London*	10 34	11 48	1 7	2 36	5 46
Mr. *Robinſon*	*Guiſborough*	9 59	11 20	12 41	2 42	6 27
Mr. *W. Brown*,	*Cleebury* —	10 17	11 32	12 46		
	Dublin —	9 59	11 14	12 28		5 43
Mr. *Ab. Donn*,	*Biddeford*	10 25	11 44	1 3	2 38	6 15
	Virginia	5 43	7 2	8 21		
Friend *Montague*,	*London* —	10 36	11 59	1 23	2 47	7 5
Mr. *N. Farrer*,	*London*	10 33	11 49	1 5		
	Sunderland	10 28	11 44	1 0	2 32	5 49
	Morpeth	10 27	11 43	12 59		
Mr. *J. Bulman*,	*London* —	10 30	11 51	1 8		
	Carliſle —	10 19	11 40	12 57	2 38	5 51
	Deptford	10 31	11 52	1 9		
Mr. *Th. Glaſpool*,	*Wincheſter*	10 31	11 18	1 5	2 34	
	Nottingham	10 36	11 52	1 7	2 31	5 18
	Bungay	10 34	11 51	1 7	2 33	

Mr. *Jo.*

		H. M.	H. M.	H. M.	H. M.	D. M.
Mr. *Jo. Taylor*,	*London*	10 18	11 43	1 9	2 51	7 9
	Snaith	10 14	11 39	1 5		
	Liverpool	10 18	11 33	12 59		
Mr. *Cuth. Cockſon*,	*Lamton*	10 26	11 42	12 59	2 32	5 48
Mr. *R. Hughs*,	*Pentreſſoden*	10 30	11 44	1 5	2 25	
Mr. *J. Wilſon*,	———	10 27	11 42	12 57	2 33	5 54
Mr. *J. Hilton*,	———	10 16	11 30	12 45	2 29	5 43
Mr. *J. Canton*,	*London* —	10 32	11 52	1 12	2 40	6 19
	Stroud —	10 23	11 43	1 3		
Mr. *T. Sparrow*,	*Edmondſbury*	10 34	11 50	1 6	2 32	5 48
Mr. *Cha. Facer*,	*Watlington*	10 21	11 36	12 51	2 30	5 43
Mr. *Schoolcroſt*,	*York*, ——	10 23	11 44	1 5	2 41	6 24
	London,	10 27	11 48	1 9		
	Jeruſalem	12 49	2 10	3 31		
Mr. *J. B. Smith*,	*Oxon* ——	10 27	11 46	1 5	2 38	6 2
Mr. *J. Benwell*,	*Highworth*	10 26	11 42	12 58	2 32	5 44
Mr. *T. Cooper*,	*Wellingborow*	10 14	11 34	12 54	2 39	6 13

Mr. *W. Schoolcroſt* gives the Tranſit of Mercury over the Sun 21 *Apr.* 1740, inviſible at *London*, but may be ſeen in the weſtern parts of *America*. The beginning at $10^h\ 22'$ at Night, Middle $11^h\ 41'$; End $1^h\ 1'$ in the Morning; Duration $2^h\ 39'$; apparent Time at *London*.

Venus over the Sun 26 *May* 1761. apparent Time at *York*, beginning at $2^h\ 26'$ Morn. Middle $5^h\ 30'$; End $8^h\ 34'$.

At *Griff* in *Warwickſhire*, the Quantity and Times of the Sun's Eclipſe 24 *July* 1739, was obſerv'd: At $3^h\ 25'$ Afternoon near 2 Digits: $3^h\ 32' = 3$ Digits; $3^h\ 35' = 4$ Digits; $3^h\ 56' = 5$ Digits; at $4^h = 7$ Digits; at $4^h\ 34'$ the middle near 8 Digits; at $4^h\ 50' = 6$ Digits; at $5^h\ 1' = 5$ Digits; at $5^h\ 13' = 4\frac{1}{2}$ Digits; at $5^h\ 20' = 3$ Digits; at $5^h\ 26' = 2$ Digits; at $5^h\ 30' = 1$ Digit; at $5^h\ 32'$ the End.

A Latin ÆNIGMA *by* Terpſiphilus.

Lubrica aſpectu, dominæ ſagaci
Vernula inſignis, ſine dente Mordax
Helluo, a naſo vel ad umbilicum
Rictibus hiſco.
Pendulum cernas laqueo, aut Jacentem
Nunc crucis, nunc ad gladii figuram;
Cruribus totam veluti & lacertis,
Corpore nullam.
Palpebris clauſis caritura, diſtant
Sæpe majori ſpatio, levique
Invicem ſe ſæpiùs oſculantur
Lumina tactu.
Hiſce conjunctis, veniî magiſtræ,
Admodùm ſimplex videor; remotis,
Quinquies duplex, eadem jugali
Jure bimembris.

Sint licèt nunquàm fera bella cordi,
Attamen ſummis animoſus heros
Viribus ceſſit mihi: dux ſuperbi
Fœmina facti.

II. *Latin* Ænigma, *by* B. B.

Creſcere me latitans Matris vis cogit: in altum,
Principio parvus, tempore ſurgo brevi.
Squallentes niveo ſurgunt e vertice Cani:
Candidior Cygno eſt Frons mea; læve caput.
Pingue mihi Collum non eſt; nec Truncus obeſus:
Membraque longævum plurima Corpus habet.
Me decorat crebrò ſplendens, Auroque coruſca
Vectis, qua tectum quiſque Britannus amat.
Sæpe Viris ſocium magnis me jungo ſuperbus,
Queis animi faſtu (me comitante) tument.
Vix mihi fert unquam mortem matura Senectus;
Sed ſolita eſt Hominum trux jugulare manus.
Immeritus ſolvo pœnas, & Vulnera lædunt
Innocuum: forti Pectore cuncta fero.
Sæpe Caput Mulier ferro Cervicibus aufert;
Proh Pudor; at ſævam Mors mea fiere facit.
Illa ferox (Vitâ functo me) conſcia facti
Sanguinei, lachrymis Ora rigare ſolet.
Ambroſios raro ſentit Mactator Odores;
Nam citò fœtorem mortuus edo gravem.
Ne tibi nunc videar parvo dignandus honore,
Suppliciter quondam me coluere Viri.
Pontifices donis Aras ſtravere ſacratis,
Et mihi ſollicitâ voce dedere preces.
Quære, Sagax, Quis ſum: Si me reperire valebis;
Cultus apud Veteres en tibi Servus ero.

Answers *to the* Ænigma's *in the laſt Year's Diary.*

231. A Shoe.
232. Death.
233. All Fool's Day, the firſt of *April.*
234. A Mince Pye.
235. The Knave of Clubbs.
236. Time.
Prize. A blacklead Pencil.
1 *Lat.* A Needle.
2 Cards.

All the Ænigma's *anſwered by* Geronto, *in the following Anacreontique, humbly addreſs'd to Miſs* W--t-n-ll *of* Na--w--h.

Charmer — let's enjoy the Hour
Whilſt we have it in our Pow'r;
The Flower you find in April gay *Æn.* 3.
Rarely lives to ſee out *May:*

Or

Or in its Bloom yet, ſome rude KNAVE 5
Plucks, and ſends to Button hole Grave:
Then, ſince no Flow'r or PENCIL ſhows *Pri.*
Half the Graces you diſcloſe,
May no ſuch ever ſieze the Prize,
Thoſe Diamonds ſparkling in your Eyes:
Come then —— lay the CARDS aſide, 2 *Lat.*
And reap the Pleaſures of a Bride:
Let me in vain no longer SUE 1
And beg for kindneſs yet from you:
Love has ſwifter Wings than TIME, 6
And DEATH oft nips us in our prime: 2
Then MINCE no longer nor be coy, 4
The fleeting Pleaſure let's enjoy;
Since 'tis to you alone my Soul
Points true as NEEDLE to the Pole. 1 *Lat.*

All the ÆNIGMA's *anſwer'd, by Mr.* W. Chaple.

LET youthful Sparks their precious TIME employ, 6
At CARDS or Dice, or with the Wenches toy, 5. 2 *Lat.*
Who all their Beauty to the PENCIL owe, *Pri.*
And of their NEEDLE very little know, 1 *Lat.*
Let the Ambitious, Honours ſtill purſue,
And wiſh'd for Titles at a Diſtance view:
Which when obtain'd by Flattery and Smoothing,
They graſp (like APRIL-FOOLS) an empty Nothing;
Let Gluttons at MINCE PYES, themſelves regale, 4
Or Drunkards drown their Senſes in their *Ale*,
Let Miſers clad in Rags, with Sandals SHOD, 1
Lock up in Cheſts their Gold, their Demi-God:
But grant, ye friendly Deſtinies that I,
Like the contented Man may live and die:
Who free from anxious Cares ſits down ſecure,
Whom none of all thoſe glitt'ring Baits allure.
His Mind's at eaſe, let Fortune ſmile or frown,
Steddy; not ſoon puff'd up, nor ſoon caſt down.
'Tis he is truly happy, truly wiſe,
He envies not the Rich, nor doth the Poor deſpiſe.
In Peace he lives, in Peace reſigns his Breath,
Not fond of Life, nor fearful of his DEATH, 6

Anſwer'd by Mr. R. Buckley.

The [a] TAYLOR, [b] SHARPER, [c] COBLER, and the [d] QUACK,
The [e] PASTRY COOK, the greateſt [f] KNAVE i'th' Pack,
Who [g] DRAW Deſigns, and mock, unthinking [h] FOOLS,
Solve all: But grant them TIME — and Stuff and Tools.

[a] *A Needle.* [b] *Cards.* [c] *Shoe.* [d] *Death.* [e] *Mince Pye.* [f] *The Knave of Clubs.* [g] *A Pencil.* [h] *Firſt of* April.

By Mrs. Arabella Atkinſon.

The FIRST OF APRIL is as ſure as Fate, 3
New SHOES, MINC'D PYES, and PAM, on *Chriſtmas* wait. 1. 4. 5
My Blacklead-PENCIL Riddles ſhall explore *Pri.*
Till TIME and DEATH, ſhall be no more. 6. 2

An Anſwer to the Ænigma's, *by* Scholaſticus.

If *Frenchmen* go in Wooden SHOES 1
What ſhall we wear, if true the News,
That *Spaniards* threaten DEATH to all, 2
Uſe what they Trade illicit call?
Whatever our ſad FATES ſhall be, 3
Old TIME muſt tell; 'tis not for me: 6
But if *News-writers* don't tell Lyes,
We're to expect no more MINCE-PYES, 4
For if to Flatt'ry we don't yield
BRIB'RY will ever gain the Field. 5
I've loſt my PENCIL; wrote without, *Pri.*
Which you will eaſily find out.

By Mrs. Eliz. Cotterell *of* Bewdley.

A *Schoolmiſtreſs* I am by Occupation,
But I believe the youngeſt in the Nation; (*about* 18.)
NEEDLE in hand I oft improve the Fair, 1 *Lat.*
Sometimes in Anger, tell how dull they are.
No CARDS I ſuffer, ſo no KNAVE I fear, 2 *Lat.* 5
But with my PENCIL, I my Lines do ſteer.
My SHOES are num'rous, not very good, 1
MINC'D-PYE to me is but ſuperfluous Food. 4
My Girls I learn their precious TIME to prize, 6
Leſt DEATH, ſhou'd on a ſudden ſeal their Eyes. 2
In anſwer to the Ænigma's this I offer,
An APRIL-FOOL may be allow'd to proffer. 3

Anſwer'd by Ruſticus, *in the Advice of* Prudentius *to his Son, about to get a Wife.*

Prudentius to his Son, about to get a Wife.
FAIR let her be, and ſprung from generous Blood;
In Virtue train'd, and prone to every good.
Whether in Silk, ſhe tread, or Leathern SHOE, 1
If thus adorn'd the lovely Maid purſue.
In all her Dreſs, let modeſt Nature guide,
And keep her from the uſeleſs Pomp of Pride.
If ſhe with PENCIL note the Actions of the Great, *Pri.*
Or with her NEEDLE work ſome glorious Feat, 1 *Lat.*
Let there in both appear a generous Striſe,
To vie with Nature, and outdo the Life.
To CARDS averſe, and KNAVE with painted Coat, 2 *Lat* 5
Her TIME to uſeful things ſhe ſhould devote: 6

Expert

Expert to build in every Shape and Form,
The annual PYE, thy Table to adorn. 4
To ſuch a Woman, then devote thy Love,
Till DEATH demands thee to the World above; 2
And tho' thou married be on APRIL Day, 3
None ſure will take thee for a Fool in *May*.

Anſwer'd by Mr. Geo. Trim.

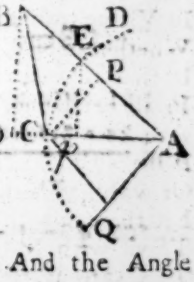
As I was whiſtling to my Plough, briſk *Nell* by chance came by;
I felt my ſelf I know not how, nor gueſs'd the Reaſon why.
My Heart cry'd Joult, my B'ood ran cold, I ſcarce cou'd draw my Breath.
My Fingers ſtraight forſook their hold, and I turn'd pale as DEATH. 2
I've oft a Match at Foot-ball play'd, my Shins had many rubs,
Was ne'er of Cudgel play afraid, nor any KNAVE of CLUBS. 5
What means this trembling then all o'er? 'Tis plain as A, B, C,
Such Pains I never felt before, are ſure for Love of thee.
O pity, deareſt *Nell*, I ſaid, pity a Love-ſick Swain:
Who never lov'd another Maid, nor ne'er will love again.
Cou'd I the PENCIL handle well, or ſkill the Painter's Art, *Pri.*
I'd draw thy Picture, lovely *Nell*, and wear it next my Heart.
"You Men have all the Arts, ſhe cry'd, and what can Women do?
"You uſe us when our Frailty's try'd, juſt like a worn out SHOE. 1
"Then how like APRIL-FOOLS we look? Like hot MINCE-PYE in *May*, 3.4
"By ev'ry nicer Taſte forſook, regardleſs thrown away.
"But, *Dick*, if you in earneſt prove, and mean for me to tarry:
"By Conſtancy firſt ſhew your Love, 'tis TIME enough to marry. 6

They were anſwered alſo by Mr. *Hoare*, *Criſpin*, Mr. *Mobs*, Mr. *Wilſay*, Mr. *Stewart*, *Iuſanus*, Mr. *J. Watts*, Mrs. *Dod*, Col. *Dagger*, Mr. *Adamſon*, Mr. *Williams*, *Juvenis*, *Philogynus*, *Adoleſcens*, *Blowſabella*, *B. B. Pſittacus*, *Old Gentry*, Mr. *J. Collier*, *Cottilus*, Mr. *N. Farrer*, Mr. *Bird*, Mr. *J. Carleſs*, Mr. *Alcocâ*, Mr. *Ij. Johnſon*, Mr. *T. Cliſton*, *Vedaſtus*, *Downright Thump*, *Tom. Tickle*, Mr. *R. Wearing*, *Puzzle*, and many others which may be ſeen in the Catalogue at the End, which room would not admit in ſhowing a Variety of curious Verſes.

ANSWERS *to the* QUESTIONS, 1739.

The 205th *Queſtion anſwer'd by the Propoſer* J. Turner.

Let AB $= x$; AC $= 14 = b$; CB $= 22 = c$; $cc - bb = 288 = m$; Then the Coſine of the Angle BAC $= \frac{xx - m}{2x}$: but the Arch CE $= 4x = nx$; and the Radius $= b$; conſeq. the Coſine of the ſaid Arch $= b - \frac{nnxx}{2b} + \frac{n^4x^4}{24b^3} - \frac{n^6x^6}{720b^5}$ &c. Therefore $\frac{xx - m}{2x} = b - pxx + qx^4$, &c. From which Equation by converging Series, the Value of x comes out $= 28,9443$: And the Angle BAC $= 47$ Degrees 17 Minutes.



Merones *answers this Question thus:*

Let the Radius AC $= r$; CB $= s$; take an Arch p, as near CE as possible, let $a =$ its Sine; $b =$ its Cosine to the Radius r, and let $p + z =$ CE: and *per* Queſt. $\frac{s}{r}p + \frac{s}{r}z =$ AB; alſo the Coſine AP $= b - \frac{az}{r} - \frac{bz^2}{2rr} + \frac{az^3}{6r^3} +$ &c. And BP $-$ AP $= \frac{s}{r}p + \frac{s}{r}z - 2b + \frac{2a}{r}z + \frac{b}{rr}z^2 - \frac{az^3}{3r^3} -$ &c. different Segments of the Baſe. But by Ax. 4th of plain Trigonom. $\frac{s}{r}p + \frac{s}{r}z : s + r :: s - r$: dif. Segments. Whence we have

$$\left.\begin{matrix} + \frac{5ap}{r} \\ + \frac{25p}{2} \\ - 5b \end{matrix}\right\} z \left.\begin{matrix} + \frac{5bp}{2rr} \\ + \frac{5a}{r} \\ + \frac{25}{4} \end{matrix}\right\} z^2 \left.\begin{matrix} - \frac{5ap}{6r^3} \\ + \frac{5b}{2rr} \end{matrix}\right\} z^3 = \left.\begin{matrix} + ss \\ - rr \\ + 5bp \\ - \frac{25}{4}pp \end{matrix}\right\} = R.$$

Now aſſume $p = 11\frac{1}{2}$: and then $\frac{180p}{r \times 3,141592} =$ the Degrees of the Arch P; from whence is had $a = 10,249675$; $b = 9,536464$; all which ſubtracted in the foregoing Series, and putting A, B, C, &c. for the known Co-eficients and reverſing the Series, we ſhall have $z = \frac{R}{A} - \frac{BR^2}{A^3} + \frac{2BC - AC}{A^5} R^3$, &c. $= ,0704043$, and the Arch CE $= 11,5704043$; and AB $= 28,926011$.

Mr. *Robert Heath* ſays, by a Table of natural Sines and a few Trials, I find the Angle CAB $= 47^{\circ}\ 21'$ whence the requir'd Side AB $= 28,925$, &c. The Method of ſolving this by infinite Series, which converge ſo ſlow, renders it more tedious than uſeful.

Anſwer'd by Mr. Hen. Travis.

Let CB $= b$; CA $= a$; AP $= y$; and as in *Simpſon*'s Fluxions, p. 121. we have QC $= y + \frac{y^3}{2.3a^2} + \frac{3y^5}{2.4.5a^4} + \frac{3.5y^7}{2.4.6.7a^6}$ &c. and $\frac{2a \times 3,1416}{4} = 21,991 = q$; from which take QC, leaves $q - y - \frac{y^3}{2.3a^2} - \frac{3y^5}{2.4.5a^4} - \frac{3.5y^7}{2.4.6.7a^6}$ &c. $=$ CE;

which

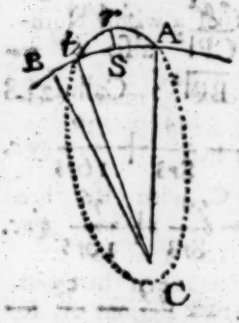
which multiplied by $\frac{r}{2}$ gives $\frac{59}{2} - \frac{5y}{2} - \frac{5y^3}{2.2.3a^2} - \frac{3y^5}{2.4a^4}$ &c. $=$ AB, and *per Euclid* 1. 47. $aa - yy = \overline{CP}^2$ alſo $b^2 - x^2 + y^2 = \overline{BP}^2$; or $288 + y^2 = \overline{BP}^2$: Call $288 = rr$; then $PB = \sqrt{rr+yy}$; or $\frac{r+yy}{2r} - \frac{y^4}{8r^3} + \frac{y^6}{16r^5}$ &c. $=$ PB; to which add y; gives $r+y+\frac{y^2}{2r} - \frac{y^4}{8r^3} + \frac{y^6}{16r^5}$ &c. $=$ AB; hence $r+y+\frac{y^2}{2r} - \frac{y^4}{8r^3} + \frac{y^6}{16r^5}$ &c. $= \frac{59}{2} - \frac{5y}{2} - \frac{5y^3}{2.2.3a^2} - \frac{3y^5}{2.4a^4} \therefore y + \frac{5y}{2} + \frac{y^2}{2r} + \frac{5y^3}{2.2.3a^2} - \frac{y^4}{8r^3} + \frac{3y^5}{2.4a^4}$ &c. $= \frac{59}{2} - r$; multiplying by 2. and dividing by 7, gives $\frac{59-2r}{7} = z$; $\therefore y = z - \frac{zz}{7r} + \frac{2z^3}{49r^2} - \frac{5z^3}{7\times 2a^3} + \frac{5\times 5z^4}{7\times 7\times 2ra^3} - \frac{5z^3}{7\times 7\times 7r^3} + \frac{z^4}{7\times 4r^3}$ &c. $\therefore y = 9.46$ and AB $= 28,94$.

Mr. Nich. Farrer's *Anſwer.*

In the Scheme *Page* 7. let fall the Perpendicular BO, on AC produced, alſo E*p* from the Point E; then let $r = AE = 14$; $m = BC = 22$; and put $x =$ the Arch of a Circle, whoſe Radius is Unity, ſimilar to the Arch EC, then $rx =$ Arch EC *per* ſimilar Triangles; and its Sine $= r \times x - \frac{x^3}{6} + \frac{x^5}{120} - \frac{x^7}{5040}$ &c. $=$ E*p*; and $\frac{5rx}{2} =$ AB *per* Queſt. and $\frac{25rx^2}{8} - \frac{mm-rr}{2r} =$ OC *per* 12 *Euc.* 2. ſubſtitute $a = \frac{25r}{8}$, and $b = \frac{mm-rr}{2r}$: Then $axx - b =$ OC; and *per* 47 *Euc.* 1: $\sqrt{m^2 - a^2x^4 + 2bax^2 - b^2} =$ BO; and *per* 4 *Euc.* 6. AE : E*p* :: AB : BO, *i. e.* $r : rx - \frac{x^3}{6} + \frac{x^5}{120}$ &c. :: $\frac{5rx}{2} : \sqrt{m^2 - a^2x^4 + 2bax^2 - bb}$; therefore $\frac{2}{5rx}\sqrt{m^2 - a^2x^4 + 2bax^2 - bb} = x - \frac{x^3}{6} + \frac{x^5}{120} - \frac{x^7}{5040}$ &c. and the Value of $x = ,82646$; and AB $= 28,9211$ the Chains required in Anſwer.

The

The 206th *Queſtion anſwer'd by* Merones.



Let the Ball be projected from A, the Time of its Flight will be 25¾ ſeconds; in which Time, the Point A will be carry'd to B, thro' a Space AB, of 23666 Feet, by the Earth's Rotation. Now the Ball (carried by a compound Motion, of its Projection and the Earth's Rotation) will deſcribe an Ellipſis, whoſe Focus is in the Centre of the Earth; in which the eliptic Area *Art*C = the Circular Sector ASBC: Or the Area *Art*A = Area BC*t*; but by reaſon of the ſmall Ratio of *r*S, to AC, the Portion A*r* may be taken for a Parabola. Let AC = *b* = 21000000 feet; AB = *d* = 23666 feet. *r*S = *b* = 2640; *a* = B*t*; then will $\frac{ba}{2} = \frac{2}{3} b \times d - a$; and $3ba + 4ba = 4bd$; whence $a = \frac{4bd}{3b+4b}$ $= \frac{4bd}{3b}$ nearly = 3,967 Feet. Near 4 Feet to the Weſt.

Mr. Hen. Travis's *Anſwer.*

The Time of the Ball's aſcending is equal to the Time of its deſcending, according to the Writers on Projectiles; which Time call (x) and the Number of Feet a heavy Body will fall or deſcend freely, by the Force of its own Gravity, in one Second of Time = (n) Then will $nx^2 = 2640$ = the Feet in half a Mile; $\therefore x^2 = \frac{2640}{n} = \frac{2640}{16,1} = 163,98$ nearly, $\therefore x = 12'\ 48'' =$ the Time the Ball is aſcending and deſcending; and, conſequently the Ball will fall near 4 Feet from the Place it was projected.

The 207th *Queſtion anſwer'd by Mr.* J. Hill.

Call the Number of Hogs any Woman bought x; the Number her Huſband bought $x + n$; Money laid out by the Woman is x^2 Shillings; Money laid out by the Huſband is $x^2 + 2nx + n^2$ Shillings. Equation $x^2 + 2nx + n^2 = x^2 + 63$. $\therefore x = \frac{63 - n}{2n}$: If $n = 1$; then $x = 31$; and $x + n = 32$; hence ſome Woman bought 31 Hogs, and her Huſband 32; if $n = 3$ then $x = 9$ and $x + n = 12$; therefore ſome other Woman bought 9, and her Huſband 12: If $n = 7$ then $n + x = 8$ $\therefore$ ſome Woman bought 1, and her Huſband 8. Conſequently

Hendrick bought	32, and his Wife	*Anna*	31
Claas	12	*Catrlin*	9
Cornelius	8	*Geertruii*	1

Anſwer'd by Merones.

	Men.			*Women.*		
For the Perſons put	A.	B.	C.	P.	Q.	R.
Hogs	*a*,	*e*,	*y*	$e-c$,	$a-b$,	*u*.
Money	*aa*,	*ee*,	*yy*	$e-c^2$,	$a-b^2$,	*uu*.

Let $b = 23$; $e = 11$. Compare B with Q, then *per* Queſt. $ee - a - b^2 = 63$ Shillings; that is, putting $e = a + z$; $2az + zz + 46a = 592$; Therefore $a = \frac{23 - z}{2} + \frac{63}{2z + 46}$; now 'tis evident the laſt Term

cannot be a whole Number; therefore z in the first Term must be an even Number, so the last Term $\frac{63}{2z+46}$ must be the half of a whole Number; let $\frac{63}{z+23} = v$. Whence $z = \frac{63}{v} - 23$; hence v, must be either 1, 3, 7, 9, 21, or 63: From each of which is had a 54 · 32 · 14 · 22 · 24 } and again comparing C with P, then e 42 · 12 · 12 · 8 · 8 } $yy - ee + 22e = 184$; and we find $\begin{cases} y, & 12. & 8. & 8. & 12. & 32. \\ e, & 2. & 10. & 12. & 20. & 42. \end{cases}$ Whence e must be the same in both Suppositions ∴ 'tis 12, if the Queſt. be poſſible in whole Numbers. But ſince the other two Perſons A, R, muſt be compar'd, therefore $aa - uu = 63$: From hence $a = 32$; $u = 31$; $e = 12$; and $y = 8$; but comparing the Men and Women in any other Manner, it will appear there is no other Anſwer in whole Numbers. Therefore *Hendrick* and *Anna*, *Claas* and *Catriin*, and *Cornelius* and *Geertruii*, are Man and Wife.

The ſame anſwer'd by Mr. Rob. Heath.

Let x = the Hogs bought, be either *Hendrick*, *Claas* or *Cornelius*; then xx will be the Shillings they coſt; and $xx - 63$ the Shillings their Wives Hogs coſt, which (as whole Hogs) muſt always be a ſquare Number; becauſe the ſquare Root of Shill. laid out for each Parcel, is equal to the Number of Hogs. Let $x - y$ = the Side of that Square, then $xx - 63 = xx - 2xy + yy$. Conſequently, by Reduction, $x = \frac{63 + yy}{2y}$; whence we find y, may be

Hogs.

1	Conſeq.	32	bought by	31
3	$x =$	12	the Men,	9
7		8	coupl. with	1

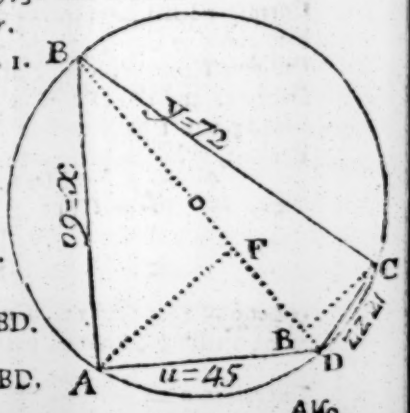
bought by their Wives.

Whence are join'd *Hendrick* and *Anna*, *Claas* and *Catriin*, *Cornel.* and *Geertruii*.

Mr. *N. Farrer* obſerves, that the Number of Hogs, the three Men and their reſpective Wives bought will be expreſs'd by three Pair of Numb. The Difference of whoſe Squares muſt be 63. Now all the whole Numbers whoſe Squares will produce this Difference are 1 and 8, 9 and 12; 31 and 32; therefore 8, 12, 32, the Men bought; 1, 9, 31 the Women.

The 208th *Queſtion anſwer'd by the Propoſer.*

FIG. 1.



1 $d : y :: z : \frac{zy}{d} = CE.$

2 $\frac{y^2 - z^2 y^2}{dd}$ or, $\frac{\sqrt{d^2 y^2 - z^2 y^2}}{d^2} = BE.$

3 $\frac{z^2 - z^2 y^2}{ad}$ or, $\sqrt{d^2 z^2 - z^2 y^2} = ED.$

4 $\frac{\sqrt{d^2 z^2 - z^2 y^2} + \sqrt{d^2 y^2 - z^2 y^2}}{d} = BD.$

5 $\sqrt{d^2 x^2 - u^2 x^2} + \sqrt{d^2 u^2 - x^2 u^2} = BD.$

Alſo

Alſo | 6 | $Axy - Bu + x = C$, *per* Queſt. FIG. 2.
7 | $x = C - Axy - Bx$; which ſubſtitute for x.
8 | $\sqrt{d^2x^2 - u^2x^2} + \sqrt{d^2u^2 - x^2u^2} = C - Axy - Bx$
$\sqrt{d^2 - y^2} + \sqrt{d^2y^2 - y^2 \times \overline{C - Axy - Bu}^2}$

Here we have one Equation including three unknown Quantities, and yet the Queſtion is truly limited; and to be reſolved as the following Queſtion is.

Given $2yx + \frac{2592}{uy} + 4ux = 48x - x^2$. FIG. 3.

Quere x y and u?

In $\dot{x}$'s and $\dot{x}$ vari. y vari. | 1 | $2y\dot{x} + 4u\dot{x} = 48\dot{x} - 2x\dot{x}$
2 | $2y\dot{x} - \frac{2592u\dot{y}}{u^2y^2} = 0$. And (3) $-\frac{2592\dot{u}y}{u^2y^2} + 4\dot{u}x = 0$

From the firſt, ſecond, and third Steps, by common Algebra we get $x = 12$; $y = 6$; and $u = 3$; and by the very ſame Method of Reaſoning, the Sides of the Trapezium are found to be $x = 60$; $y = 72$; $u = 45$; and $z = 21$; and the Area $= 2106$ ſquare Feet. This Trapezium may be placed 4 or 5 different Ways in a Circle, which I have prov'd by a large geometrical Projection, and every way juſtly contain the remaining Chords of the Circle and meaſur'd, amount to each the ſame Area 2106 ſquare Feet. (1) In the firſt *fig.* the ſeveral Lines are obvious, and the Diag. BD $= 75$. Multiplied by the half of the two Perpendiculars (CE $= 19,65$; AF $= 36,52$) will give the Area as above. (2) In *fig.* 2. BC $= y = 72$; BD $= z = 21$; DA $= x = 60$ and AC $= u = 45$. And the Diag. DC ($= 74,96$) mult. by half the Perpendiculars (AF $= 35,75$ and BE $= 20,2$) gives nearly the ſame Area. (3) In *fig.* 3, y is the Line AB; x is BA, z is AD, and u is x. The Diag. BD 70,01, the perp. At $= 16,6$; CE $= 43,1$ nearly; and (4) in the ſame *fig.* x is repreſented by BO: u by OA; and x by AC; the Diag. OC is nearly 74,95, which by the Perpendiculars gives the Area as before.

Mr. *Paul Sharp* has found the Sides 72, 60, 45, and 21. in anſwer.

Mr. *Tho. Robinſon* gives the Sides 72, 2; 59, 9; 45, 1; 20, 7 nearly true. In this Queſt. it does ſeem to appear, that the Number of Quantities ſought, exceed the Number of given Equations, and (as my ingenious Correſpondents have obſerv'd) is unlimited. But I preſume ſince the Numbers given in the Queſt. *viz.* A $= 100$; B $= 5$; and C $= 432246$; and the four Numbers ſought are together obliged to extend the Chords of 360 Degrees, and the Diameter of the Circle is given; it may be ſaid to be limited; but I ſhall rather leave it to the Speculation of thoſe ingenious Perſons, who are pleas'd to appear in the *Emendata* next Year.

The 209th *Queſtion anſwer'd by* Merones.

$\overline{x^{\frac{1}{3}}|x^{\frac{2}{3}}}$ = a Minimum. Therefore $x^{\frac{2}{3}} \times$ Log. $x^{\frac{1}{3}}$ Min. whence $\frac{2}{3} x^{-\frac{1}{3}} \dot{x} \times$ L. $x^{\frac{1}{3}} + \frac{1}{3} x^{-\frac{1}{3}} \dot{x} = 0$; or 2 Log. $x^{\frac{1}{3}} + 1 = 0$.

$1 = 0$. And therefore Hyp. Log. $x^{\frac{2}{3}} = -\frac{1}{2}$. And Tab. Log. of $x^{\frac{1}{3}} = -\frac{1}{2} \times 434294 = -1.782853$. Therefore $x = ,60653$; and $x = ,22313$.

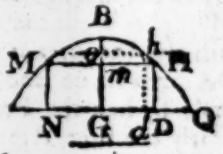
The Propoſer, Mr. Heath, *anſwers thus.*

Its Log. is a Minimum. Let $y^3 = x$, the Expreſſion will come $\overline{y^l y^2}$; its Log. $= l : y \times y^2$, flux'd, $yy + l : y \times 2yy = 0$. Reduc'd $l : y = -\frac{1}{2}$, conſequently $l : y^3 = l : x = -\frac{3}{2}$; whence, the natural Number correſponding thereto is $= 23130$, *&c.* And accurately; which is the Value of x requir'd.

N. B. This Problem ſhews the Diſuſe of Mr. *Simpſon*'s Series, (p. 165. of his Fluxions) for finding the Number anſwering to any hyperbolical Logarithm: For inſtead of converging, it diverges in many Caſes; as if $\overline{x^{\frac{1}{2}}}|^{x^{\frac{1}{2}}}$ were a Minimum, $x = -6$; and $x = 00247875$, *&c.* Here it diverges very ſwift; but converges very ſlow in the former Caſe as to be uſeleſs.

The 210th *Queſtion anſwer'd by Mr.* R. Heath.

In the *Hyperbola*, there is given the Figures $= 100$ Inches $= p$; $BG = 15 = a$, $HD = mG = 10$, $BM = 5 = b$; $GD = mH = 12 = c$; let $x = Bo$; and $y = oh$ requir'd.



By the Property of the Curve, $p + b \times b : c^2 :: p + x \times x : yy$. $\therefore x^2 + px = \frac{p+b\times b}{cc}\,yy$, and $x = \sqrt{\frac{1}{4}pp + \frac{p+b\times b}{cc}\,yy} - \frac{1}{2}p$. $a - x = a + \frac{1}{2}p$ min. $\sqrt{\frac{1}{4}pp + \frac{p+b\times b}{cc}\,yy} = oG = hd$ (put $f = a + \frac{1}{2}p$; $g = \frac{p+b\times b}{cc}$) its plain, the Fluxion of $Gd \times d$, into the Area of the Circle whoſe Rad. is hd, is equal the Fluxion of the *indefinite Solid*, generated by the Rotation of the Curve (Bh) about Gd; $4 \times ff + \frac{1}{4}pp + gyy - 2f\sqrt{\frac{1}{4}pp + gyy} \times .7854\,y$ whoſe Fluent is $3.1416y \times f^2 + \frac{1}{4}pp + 3,1416y3 \times \frac{2}{3}$ (let $n = 3.1416$) $- fpny - \frac{2fngy^3}{3p} + \frac{2fng^2y^5}{5p^3} - \frac{4fng^3y^7}{7p^5} + \frac{10fng^4y^9}{9p^7}$ — *&c.* and if c be

prit

put inſtead of y, in the Expreſſion, we have the Solidity of half the Caſk = 6754,8 Inches, true to a Decimal; conſequently 13509,6 Inches the whole Content, or 47.893 Ale Gallons.

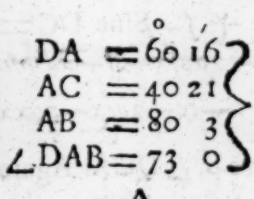
Merones *Anſwer.*

Let the Semitranſverſe CA = r = 50; CD = a = 65; □ QPA = p = 525. PE = q = 12; dd = aa + rr; c = 3.14159; CB = x; GF or DB = $a - x$; BF *or* GD = y; then *per* Conics $qq : pp :: yy : xx - rr$; whence $x = \sqrt{rr + \frac{pp}{qq}\,yy}$; and $BD^2 = \overline{a - x}^2 = dd + \frac{pp}{qq}\,yy - 2a\sqrt{rr + \frac{ppyy}{qq}}$: Therefore $DB^2 \times c\dot{y} = cdd\dot{y} + \frac{cpp}{qq}\,y^2\dot{y} - 2ca\dot{y}\sqrt{rr + \frac{pp}{qq}\,yy}$ = Flux. ſolid AFGD revolving round GD; put $L = 2{,}302585 \times \text{Log.}\ \frac{p + \sqrt{rr + pp}}{r}$; and write q for y in the Fluent, and we ſhall have $cd^2q + \frac{1}{3}cppq - caq\sqrt{rr + pp} - \frac{caqrr}{p}\,L$ = half the Caſk = 6754,88 Inches, and the whole = $13509\frac{3}{10}$ = 47,907 Ale Gallons.

Mr. *Farrer*, Mr. *Turner*, and Mr. *Travis*, have alſo curiouſly wrought this Anſwer by a different Proceſs.

The 211 *Queſtion anſwer'd by Mr.* R. Heath.

Given			Sines.			Coſines.	
DA	= 60° 16′		.86747 = b		.49747 = c		∠DCA =
AC	= 40 21		.64745 = d		.76210 = f		ACB
AB	= 80 3		.98495 = g		.17278 = h		Req^{d} DC
∠DAB	= 73 0		.95630 = s		.29237 = t		and CB?



It muſt be noted that DC and CD are not two continued Arches (as in the laſt Diary) for ſo the Queſtion wou'd be over limited and abſurd, but Sides of different Triangles. Let x = Coſ. ∠DAC. $\sqrt{1 - xx}$ its Sin. Rad. = 1. Then (*per Anderſon's* Theorem) $bdx + cf$ = Coſ. DC; its Sine $\sqrt{1 \text{ min. } bdx + cf|^2}$ By Trigonom. s. DC, s. ∠DAC : : s. DA : s. DCA, = b

By

$\sqrt{1-x}$ / 1 min. $\overline{bdx+Cf}|^2$: Now, Cof. $\angle CAB = xs + s\sqrt{1-xx}$; Sine $xs, -t\sqrt{1-xx}$ and by the foreſaid Theorem $dgtx$, $+dgs\sqrt{1-xx}+hf$ = Coſine CB. Whence $\sqrt{1 \text{ min. } dgtx, +dgs\sqrt{1-xx} : +hf}|^2$ = its Sine. *per* Trigonomet. *s.* CB : *s.* $\angle$CAB : : *s.* AB : *s.* $\angle$ACB = $\frac{xs, -t\sqrt{1-xx}; \times g}{\sqrt{1 \text{ min. } dgfx, +dgs\sqrt{1-xx} : +hf}|^2} = b$ $\sqrt{\frac{1-xx}{1 \text{ min } \overline{bdx+Cf}|^2}}$ by Reduction 1 Min. $\overline{bax-cf}|^2$ $\overline{xs, -t\sqrt{1-xx}; \times 9}|^2 = b^2 \times \overline{1-x^2} \times 1$ min. $\overline{dgtx, +dgs\sqrt{1-xx} : +hf}|^2$. In Numbers, 1 Min. $\overline{.561643x+.379121}|^2 \times \overline{.941907x, -.287969\sqrt{1-xx}}|^2 = .7525 \times 1-xx, \times 1$ Min. $18647x, +.60993\sqrt{1-xx} : +.131675|^2$ Here x [by a new Method of ſolving Equations] is found $=.8770$, *&c.* Whence DC $= 4900 = 29° : 21'$, and BC $= 58086 = 53° : 58'$. *Q. E. I.*

Mr. *J. Turner* obſerves the Scheme is falſe drawn, and ſo makes no Queſtion at all; but correcting it, and putting $b =$ Rectang. *s.* AD, AC, $c =$ your Cof. $d =$ Rectan. AC, AB; $f =$ Cof. $g =$ Sine AD; $h =$ *s.* AB; m $\angle$BAD, $n =$ its Cof. $x =$ Cof. $\angle$DAC $\sqrt{1-xx} =$ its Sine. Then the Sine of BAC $= mx-n\sqrt{1-xx}$, and its Cof. $= nx+m\sqrt{1-xx}$, Cof. DC $= bx+c$; Cof. BC $= dnx+dm\sqrt{1-xx}+f$. Sine DC $= \sqrt{1-cc-2bx-bbxx} : s.\text{BC}\sqrt{1-ddnnxx-2dnfx-ff-ddmm+ddmmxx-2aanmx-2amf}\sqrt{1-xx}$. As $1-cc-2bcx-bbxx : 1-xx : : gg : \frac{gg-ggxx}{1-cc-2bcx-b^2x^2} =$ Square S. $\angle$DCA. Again $\overline{BC}^2 : \overline{\angle BAC}^2 : : \overline{BA}^2 : \angle DCA$. Conſequently, $\frac{gg-ggxx}{1-cc-2bcx-bbxx} = \frac{hhmmxx-2bhmnx\sqrt{1-xx}}{1-d^2n^2x^2-2dnfx-f^2-d^2m^2+d^2m^2x^2+hhnn-hnx-2dnmx\sqrt{1-xx}-2dmf\sqrt{1-xx}}$ which when all the Terms affected with $\sqrt{1-xx}$ are brought to one Side of the Equation, and involv'd will produce an Equation of the 8th Power

Power; in which $x = .87719$. Conſeq. the $\angle DAC = 28° : 42$
$BAC = 44° : 18'$; Side $DC = 29° : 19'$; and $BC = 53° : 59$

The Prize Queſtion anſwer'd by Mr. J. Turner.

Let P repreſent the Pole of the World, M *Moſcow*; V, *Vienna*; G, *Gibraltar*. Put $x =$ Coſ. Ang. GPV $=$ VPM : $\sqrt{1-xx} =$ Sine; Sine GP $= b$; PM $= c$; ſ. $\angle$ GVP $= \frac{\sqrt{1-xx}}{x}$; the Rectangle of the Sines of GP PV $= d$; Rect. of Coſ. $= f$; Rectangles of the Sine of VP. PM $= g$; Rect. Coſines $= h$. By *Anderſon*'s Theorem. $dx + f =$ Coſ. GV; $gx + h =$ Coſ. VM; as $\sqrt{\frac{1-x}{z}}$ $: b :: \sqrt{1-xx} : bz =$ Sine GV; and its Coſ. $= \sqrt{1-b^2z^2}$. As $\sqrt{\frac{1-xx}{z}} : c :: \sqrt{1-xx} : cz =$ Sine VM; and its Coſ. $= \sqrt{1-c^2z^2}$. Conſequently,

$$\left.\begin{array}{l} d^2x^2 + dfx + f^2 = 1 - b^2x^2 \\ g^2x^2 + 2gbx + b^2 = 1 - c^2x^2 \end{array}\right\} \begin{array}{l} x^2 = \frac{1 - d^2x^2 - 2dfx - ff}{bb} \\ x^2 = \frac{1 - g^2x^2 - 2gbx - bb}{cc} \end{array}$$

And therefore theſe two are equal to one another.

But $\frac{d^2}{b^2} = \frac{g^2}{c^2}$. So the two Terms wherein x^2 is found deſtroy each other. We have $x = \frac{c^2 + b^2h^2 - b^2 - c^2f^2}{2c^2df - 2b^2gh} = .969343$ the Coſine of 14°. 13'. 27". the Difference of Longitude of *Gibraltar* from *Moſcow* 28° 16' 54".

Vienna and *Gibraltar* bears from *Moſcow* South 56°. 4' weſterly.
Moſcow from *Vienna*, North 44 : 50 eaſterly.
Gibraltar from *Vienna*, South 44 : 50 weſterly.
Vienna and *Moſcow* from *Gibraltar* North 35 : 16 eaſterly.
Vienna is diſt. from *Gibr.* 16°. 29' $=$ 1146 *Eng.* Geom. Miles; *Vien.* from *Moſc.* 11° : 23' $=$ 791 Miles; *Gibraltar* from *Moſcow* 11°; 22' $=$ 791 Miles. *Gibraltar* from *Moſcow* 27° : 52' $=$ 1937 Miles. This Anſwer is perform'd by a ſimple Equation. —— The ſame was anſwer'd by Mr. *Rob. Heath*, the Propoſer; and by *Merones*.

Mr. *N. Farrer*, Mr. *Rob. Robinſon*, Mr. *H. Travis*, Mr. *J. Powle*, Mr. *Joſ. Young*, and ſome others have alſo curiouſly inveſtigated the Anſwer to the *Prize Queſtion*. New

New ÆNIGMA's *to be anſwer'd next Year.*

(1.) ÆNIG. 237. *By Col.* Dagger.

YE prying Fair, who learn'd would be
In Ænigmatic Myſtery,
Attend, a Monſter now I ſing,
A finite uncreated Thing;
Which will inform in one Hour, more
Than all you ever heard before,
Tho' *Chaple* preach you Lines threeſcore.
And ſhall exalt you to th' Degree
Of *Newton* in Philoſophy:
And *Hector*, as whoſe Triumphs you
Have oft been entertain'd a-new.
I ranſack every foreign Clime,
The *Ocean*, and the *Moon* ſometime;
And ſearch the Region of the Skies,
To find your greateſt Rarities.
I ſtrew the *Tables* of the *Kings*,
Regaling each with niceſt Things;
Yet found the greateſt *Thief* e'er known,
In *Country*, *City*, or in *Town*:
Stealing from all; ſo you will deem
A common Enemy I ſeem;
Yet hope you'll never find me ſo,
But otherwiſe, a Friend to you.
When *Poets* of my Labours ſing,
They make me great as any King;
'Cauſe I more *Miniſters* employ
Than *Walpole*, or the great *Viceroy*:
And if you knew my Victories,
(So often haſten'd by your Eyes:)
Yourſelves my Pow'r would ſoon declare
Greater than that of Emperor.
Yet 'twas indeed your Voice and Charms
That furniſh'd me at firſt with Arms:
My Throne upon your Tongue was founded,
I never yet but once was wounded,
By one (ſince own'd my Conqueror)
Tho' he was Slave to me before.
Whoſe Life in conq'ring me was loſt;
(Small Reaſon ſure for him to boaſt.)
My Trophies ſcatter'd all around,
Augment and ſtill enrich the Ground;
Bane to the Pleaſures of the Great,
To ſome an undiſturb'd Retreat.
Tyrannick Fool! by what I do
I haſten my own Overthrow;
The quicker my deſtructive Pow'r,
The quicker comes my fatal Hour,
When ſtraight I ſleep amongſt the Dead,
Affording Joy, removing Dread.

(2.) Ænig. 238. *By Mr.* Will. Chaple.

Of meek and humble Parents I was born,
To lead a rural Life I did not ſcorn;
And while my youthful Vigour did remain,
Was often ſeen to croſs the verdant Plain.
In harmleſs Sports I there did ſpend my Time,
Until remov'd to a leſs pleaſant Clime,
Maugre thoſe Virtues which did me adorn,
I from my Native Country ſoon was torn;
And many a Change was forc'd to undergo,
Yet by this Change I much more virtuous grow:
I cloath the Naked, and the Hungry feed,
Yea, oft the Rich do oft my Aſſiſtance need.
Princes have oftentimes with me convers'd,
When deep in Cares their Thoughts have been immers'd.
As Judge between contending Parties ſit,
Yet ne'er am brib'd, but (as is right and meet)
The cheating Knave degrade, and Innocent I quit.
The Gordian Knot I often help to tie,
And the Defects of Nuptial Love ſupply:
The Soldier with new Courage I inſpire,
And raiſe his low dejected Spirits higher.
Sometimes I am a Lawyer, or Muſician,
Now an Hiſtorian, then a Politician.
I conſtantly have an Aſſociate,
A tender, delicate, and beauteous Mate;
Who more converſant is amongſt the Fair,
Of leſs important Buſineſs has the Care,
And oftner is employ'd I frankly own;
But (my Abilities are ſo well known)
Weightier Affairs are left to me alone.
Unfit for Service now, or nigh my End,
The ſhort Remainder of my Life I ſpend,
In teaching how your Beauty to improve,
Or how your Imperfections to remove,
By ſuch a Dreſs as gains your Paramour's Love.
Laſtly, the Rich examine your Revenue,
And the Terms on which you do the ſame continue,
And if ye find me not, I'll ſay, The ——'s in ye.

(3.) Ænig. 239. *By* Patrizo.

Silence, ye Slaves, attend your Monarch's Pow'r,
Whoſe Bounds extend themſelves the Kingdom o'er;
Nor yet contented with theſe narrow Bounds,
I'm ſeen on *French*, *Italian*, *Spaniſh* Grounds:
Thro' all the Kingdoms I extend my Sway,
As free as Air.——Yet ſometimes ask to pay—
I think, e'er ſince the good Queen *BESS*'s Reign,
The Law compels each Pariſh to maintain

Their

Their Poor——You'll ſay then I'm a Pariſh Brat,
Since to maintain me great Expence they're at;
Each Summer in their Liv'ry I appear,
Which I have much ado to wear a Year,
And when 'tis rent and torn, they mend again with Care.
Perhaps from hence you'll think that I'm a Slave;
No, I deteſt the Thought: The *Romans* brave
My Fathers were; their ancient Child I am,
And, (as moſt Children do) from them I take my Name.
Marks of Antiquity from them I boaſt,
Some Traces yet are ſeen, tho' ſome are loſt,
Which prove, in me they ſpar'd no Pains or Coſt.
Now Royal Kings my noble Guardians are,
And *Britiſh* Members think me worth their Care;
Scarcely a Seſſion paſſes, but they Vote,
Nem. Con. and grant me a new Coat.

(4.) ÆNIG. 240. *By* Clericus Parochialis.

Of pureſt Metals, and of baſer, I
Am often form'd, with great Dexterity;
And am beholden many times to Trees,
And Beaſts of various Kinds too, ſuch as theſe;
The Ox, the Sheep, the Horſe, the Goat, the Calf,
And more beſides; for theſe are not the Half;
(Of diff'rent Countries, wild as well as tame)
That ſeverally yield Matter for my Frame.
In moſt of Colours are by Nature limn'd,
I ſtill appear, with Art and Neatneſs trimm'd.
So much my Splendor does allure the Eye,
And Mortals cauſe, with Curioſity
Oft, what may be my real Worth to pry.
For when I'm known, you'll find it to be true,
That often counterfeited is my Hue;
To ev'ry Age, Degree, Sect and Profeſſion,
A Slave I am, admir'd moſt in Faſhion.
My Service only's ſlighted by the Beau,
When he delights his Gallantry to ſhew.
To give my Deſcription yet compleater,
Know, that infinitely various in my Feature;
My Owner never wants me for his Uſe,
But always ready for me has a Nooſe;
Which o'er my Head he for his Good does caſt,
And keeps me all Day, as i' th' Pillory faſt.
I'm with a num'rous Train of Brethren ſeen,
All rank'd with equal Diſtances between;
Of like Complexion all, alike in Shape,
And meeting with like Treatment few eſcape.
Many of my Kindred Twin-Brethren are,
Of whom is taken more peculiar Care;
For, leſt they ſhould be loſt, or chance to ſtray,
They coupled are, like Beagles, Night and Day.
Ye charming Fair, pleaſe to reveal my Name,
But, hold——I've myſelf half done the ſame. ÆNIG.

(5.) Ænig. 241. *By* Albusinda.

Nor Form, nor Substance, in my Being share,
I'm neither Fire, nor Water, Earth, nor Air;
From Motion's Force alone, my Birth derive,
I ne'er can die, for never was alive:
And yet with such extensive Empire reign,
That very few escape my Magic Chain.
Nor Time, nor Place, my wild Excursions bound,
I break all Order, Nature's Laws confound:
Raise Schemes without Contrivance, or Design,
And make apparent Contradictions join;
Transfer the Thames, where *Ganges* Waters roll,
Unite the Equator to the frozen Pole:
'Midst *Zembla*'s Ice, bid blushing Roses grow,
And *British* Harvest bloom in *Scythian* Snow:
Cause trembling Flocks to skim the raging Main,
And scaly Fishes grace the verdant Plain:
Make Light descend, and heavy Bodies rise,
Stars sink to Earth, and Earth ascend the Skies.
If Nature lie deform'd in wintry Frost,
And all the Beauties of the Spring be lost,
Rais'd by my Pow'r, new Verdure decks the Ground,
And smiling Flowers, diffuse their Sweets around:
The sleeping Dead! I summon from the Tomb,
And oft anticipate the Living's Doom:
Convey Offenders to the fatal Tree,
When Law and Stratagem have set them free:
Aw'd by no Checks, my roving Flight can soar,
Beyond Imagination's active Pow'r.
I view each Country of the spacious Earth,
Nay, visit Realms that never yet had Birth:
Can trace the pathless Regions of the Air,
And fly with Ease beyond the starry Sphere.
So swift my Operations, in an Hour
I can destroy a Town, or build a Tower.
Play Tricks would puzzle all the Search of Wit,
And show whole Volumes that were never writ.
In sure Records my mystic Power's confess'd,
Who wrack'd with Cares a haughty Tyrant's Breast;
Charg'd in prophetic Emblems to relate,
Approaching Wrath, and his peculiar Fate.
Oft, to the Good, by Heaven, in Mercy sent,
I've arm'd their Thoughts against some dire Event;
As oft in Chains presumptuous Villains bind,
And haunt with restless Fears the guilty Mind.

New Questions *to be answer'd next Year.*

(1.) Quest. 213. *By Mr.* Rob. Heath.

A Miser thus, fair Ladies, makes Request,
What Pounds are those, at Compound Interest,
He must, for Time, on these Conditions lend,
To gain an equal Value in the End?

Square

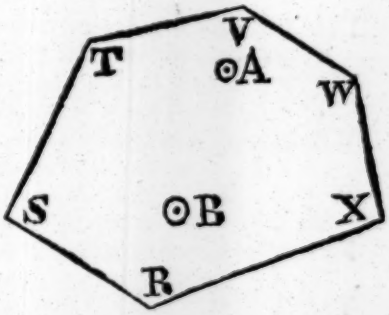
Square Root of Years, Square Root of Pounds per Cent,
Muſt equal Square Root of the Money lent:
To make it clear, the Square Root of each Three,
Compar'd with each, muſt equally agree;
Time, Rate per Cent, and Principal unfold,
And wed him, fair One, for his Bags of Gold.

(2.) QUEST. 214. *By Mr.* Nich. Farrer.

Sometime in the Spring-Quarter, in 1739, in the Forenoon, an Obſervation being made of the Sun, his Altitude was found 33°, 41′ 40″; and Azimuth from the North 102°, 40′ 52″; and ſometime after, on the ſame Forenoon, his Altitude was found 48°, 46′, 53″, and Azimuth 134°, 39′, 56″. From whence the Latitude of the Place of Obſervation, Month, Day, and Hours of Obſervation may be found, and are here required? With a general Theorem for all Queſtions of this Nature?

(3.) QUEST. 215. *By Mr.* J. May.

Going to paſs a leiſure Hour at Billiards, I wondered to find the Table an irregular Hexagon; when ſeeing the Balls fly very ſtrangely in ſtriking the ſeveral Ginns, made me think, If two Balls, A and B, lay on the ſaid Table, and the Ball A was ſtruck againſt the Ginn R S, from thence reverſing to S T, from thence to T V, then to W V, then to W X, thence to R X, thence revers'd, and ſtruck the Ball B; to find Geometrically the Points in the ſeveral Ginns, where the Ball A will ſtrike; and that by a general Conſtruction for all Polygons, ſuppoſing the Balls to be Geometrical Points?



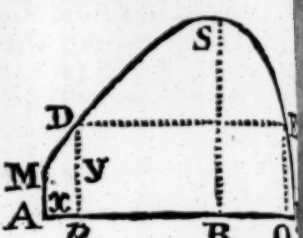
(4.) QUEST. 216. *By Mr.* Henry Travis.

AT *Matlock*, near the *Peak* in *Derbyſhire*, where are many ſurprizing Curioſities in Nature, is a Rock by the Side of the River *Derwent*, riſing perpendicularly to a wonderful Height; which being inacceſſible, I endeavoured to meaſure in a Mathematical Method. From a Station at ſome Diſtance, (nearly level with the Bottom of the Rock) I took an Angle of Altitude to its Top 47°, 30′; and having deſigned a ſecond Station, I took an Horizontal Angle of 87°, 5′, between the Foot of the Rock and that Station; the meaſured Diſtance between the Stations was 4 Chains, and 29 Links, (per *Gunter*) or 283,274 Feet. At that Place I had an Angle of Altitude 40°, 12′, but forgot from hence to take an Angle between my firſt Station, and the Foot of the Rock; yet am in Hopes ſome curious Artiſt will, from this Data, determine the perpendicular Height of this ſtupendious Rock.

(5.) QUEST.

(5.) QUEST. 217. *By Mr.* Ant. Thacker.

Given the * Equation of the Exponential Curve, M D S E B, together with the Axis A B = b = 1000; to find the greateſt Ordinate (S R) and inſcrib'd Parallelogram D E Q p, and to give the Analytical Inveſtigation of the ſame?



* $\overline{p\,B}|^{A\,p} = \overline{p\,D}|^{p\,D}$: *i. e.* $\overline{b-x}|^{x} = y^{y}$

(6.) QUEST. 218. *By Mr.* Rich. Gibbons.

I will undertake with twelve fair Dice, to throw 42 once fifteen Times; and between 37 and 47, at every Throw. Quer Whether I ſhall be a Gainer or Loſer by theſe Chances, and th exact Odds?

The PRIZE-ÆNIGMA, *and* PRIZE-QUESTION.

The PRIZE-ÆNIGMA. *By* Terpſiphilus.

I'M deck'd in my Pride, like a blooming young Bride,
Freſh and fair as the Flowers in *May*;
While a Youth in his beſt, for my Bridegrom is dreſs'd,
To crown with our Nuptials the Day.
What heightens our Bliſs is, my Siſters and Nieces,
(As the conjugal Frolick's a ſpreading)
With his Brothers and Couſins, chime in by the Dozens,
And join in the jovial Wedding.
From the Moment I change my Condition, 'tis ſtrange
To be found with my Husband in Bed;
Yet, Thanks to the Donor, a new Name of Honour
I claim from the Spouſe that I wed.
Thus marry'd for Life, like an amorous Wife,
I hug and embrace him to Duty;
Tho', our Fury to check, he hazards his Neck,
And I run the Riſque of my Beauty.
But as it's our way, to careſs all the Day,
No Wonder we grow out of Favour;
If a Slattern I be, and a Skeleton he,
Thus parted we're Strangers for ever.

The PRIZE-QUESTION. *By Mr.* Robert Heath.

NEAR *Twickenham*'s Banks, the Muſes Seat, where *Thames*
Rolls, thro' the Valley, his ſmooth clearer Streams,
A Fabrick does in peaceful Order riſe,
Whoſe Owner's Virtues reach the lofty Skies!
Secure of Fame, he ſlights all C—rt Renown
For *MARO*'s Glory, an immortal Crown.
His generous Fancy, free, and unconfin'd,
Well ſuits the Buſineſs of a noble Mind;
Beholding Flatt'ry with a pitying Eye,
And, than be guilty! ſooner chuſe to die!
Wrapp'd in himſelf, he can his Thoughts approve,
Of Truth, of Juſtice, Poetry, or Love;

Can, meditating on Life's various Scene,
See Folly's Rocks, and Seas ingulph'd between:
And ſmoothly gliding down Amuſements Stream,
Make Gardens, ſhady Bowers, or Grots, his Theme.
Or, from aloft, tall Spires, Domes, waving Woods,
Re-ecchoing Hills, fair Fields, and chryſtial Floods;
Hear the wing'd Choir, in warbling Conſort ſing,
The ſweet-tun'd Praiſes of their heavenly King.
See Swans below, Boats, beauteous Nymphs, and Men,
All moving on ſerenely, and agen.
Who'd not refuſe the gaudy Pomp of State,
To live ſo bleſs'd, ſo nobly, good and great.
T' enrich the Proſpect, let it be ſuppos'd,
A Park is purchas'd, thus to be inclos'd;
Two ſpreading Trees, on Thames ſtreight other ſide,
(Three Furlongs Diſtance) ſhade the ſilver Tide;
And from the Muſe's Seat do equally divide;
From whence a Fence of Pailing muſt ſurround,
(In Length a Mile,) the yet unfaſhion'd Ground;
On this Condition carried from each Tree,
To make the Park the biggeſt that can be.
Again, ſuppoſe a Line drawn from each Tree,
To the contrary fartheſt Boundary;
Theſe, and the Fence, to touch two * circling Shades
On right and left, each ſhelt'ring as it ſpreads:
Hemm'd with a Range of Trees, to ſcreen the Deer,
The middle Space wide op'ning to the Year.
Ingenious Ladies, you're deſired to ſhew,
The Park's true Form, Content, Shades, Area too.
APOLLO thus—ſweet Ladies, when you've done,
Bring all your Harps, and taſte the Veniſon.

* Circular Encloſures touch'd by oppoſite Sides of the Park, and Interſections of the longeſt Lines drawn from each Tree a-croſs the Park.

An Alphabetical Catalogue *of the* Contributors *to the* Diary.

ADRASTEA all En. Abadmegeor. 4 En. Ann Peg Acton all but iii. Sam. Adamſon all En. Adoleſcens all E. 3. Albuſinda Analyticus 3 E. 1. W. Aldridge all E. Ab. Alcock all E. G. Atwell iii. vi. Anonymous all but iii. Arithmeticus ii, iii. 1 lat. Æ. Annus Amanuenſis all E. Ag. Atkinſon all but v. Abr. Atkinſon all En. B. B, J. Baddier 1, 6. S. Bamfield i, ii, iv, vi. Æ. 1, 3. J. Benwell, T. Bird, all E. 1, 2, 3, 7. Blowſabella all E. T. Brecon, W. Brown all E. W. Brown i, ii, vi. Æ. J. Buckland all but v. R. Buckley all E. Abr. Bunchelot i, ii, iv. Æ. J. Bulman, J. Careleſs all E. Molly Caſewell all but iii, v. Ma Chamberlain all but iii. J. Canton i, ii, iv, vi. W. Chaple all E. Joſ. Chaple i, ii, iv, vi. Æ. J. Clarke i, ii. iv, vi. Æ. Cler. Paracholis. S. Clarke i, ii, iv. 1, 3 6. Cuth. Cockſon all but iii. 3 Æ. J. Collier all E. T. Clifton all E. Elizabeth Cooper i, ii, vi Æ. Tho. Cooper, Cottilus all E. 1. Rob. Cocke 1, 4. El. Cotterel all E. S. Criſpin all E. Bud Curray i, ii, iv, vi. Lat. Æ. Eliz. Curray, Col. Dagger all E. Tho. Dod all E. Rand. Fd Eliz Dod all E. Dolabella all E. Ab. Donn i, ii, v, vi. Æ. R. Dunthorne i, ii, iv, v, vi. 2, 3. J. Dunn all but iii J. Dutton, Nan. Edwards all E. Eliza. W. Eliot Æ.

Jo. Elſwath i, ii, iv. Nic. Farrer all E. and Queſtions, Ch. Faeer, T. and R. Forſter all E. 1, 3, 6. W. G. N. Peg. & Kit Gamul all E. T. Geare i, ii, iv, vi. Æ. Old Gentry all E. R. Gibbons all E. 1, 3. Giffard all E. T. Glaſpool, T. P. Goodwin 3, 5. Peg Gooſecap all E. T. Greenwell all E. Miſs Harper all but iii. Martha Harriſon all E. J. Hampſon all E. Ag. Hartwell all E. Rob. Heath all E. and Q. Hitton all E. J. Hill 3. J. Hobſon i, ii, iii, v, vi. 1, 3. Marg. Hoar all E. R. Hoare all E. Fr. Holliday i, ii, iv. G. Holford all E. R. Hughes. Guillot. T. Jewell i, ii, iv, vi. Inſanus all E. Iſa. Johnſon all E. J. Jones all E. Juvenis all E. Ja. Kenneſly all E. W. Leighton W. Leigh i, ii, iv, vi. Æ. Do. Liverſedge all but iv, v. F. Linton all iii. Deb. Liptnot all E. 3. T. Lovis all but v. Er. Maddox, Jen Maiſterton i, iv, vi. Marmatheſis i, ii, iv. Æ. Merones all Q. J. Mend all but iii. i. S. Manfield i, ii, vi. Æ. T. Mather all E. 13. M. Mid dleton all but 3. W. Mobs all E. Cla. Morrey i, ii. Fr. Mountag all E. J. Nelſon all but v. J. Newbury all but v. J. Nimble i, ii. An Nixon i, iv, vi. Æ. P—tt. i, ii, iii, iv. T. Peat all E. 1, 3. Palameb i, ii, iv, vi. Lat. Patrico all E. J. Pierce all but v. J. Peachy, 1, 2, J. Philadelphia i, ii, vi. W. Pigge i, iv, vi. Æ. Phylogynus all E. J. Powle, Nan Pulſton all E. Ec. Petherick i. Æ. Philenigmatic all E. Jo. Pilgrim all E. Ed. Pilbrow, J. Pritchard, Ja. Pſittacus all E. Neh. Puzzle all E. Ser. Ragg, M. Raine all but iii. J. Ranſom vi. J. Riches i, ii, iv, vi. R. Robinſon i, ii, vi. 1, 2, 7. T. Robinſon ii, iv. vi. 1, 4. Mol Roe i, iv, vi. Æ. Ruſticus all E. Sanders all W. Schoolcroft all but v. Scholaſticus all E. J. B. Smith 1, 3. Sparrow, Mar. Short i, ii, iv, vi. P. Sharp all E. 1, 3, 4. Mol Shi rard i, ii, iv. W. Sedgwick all but v. Spurling all but v. 3. E. Sin coe i, ii, iv, vi. Han. Sly i, ii, iv, vi. Soberſides, J. Small all but W. Spicer i, ii, iv, vi. 1. J. Stewart all E. G. Stopley all E. 1. 3. Taylor, Tom Tickle all E. Terpſiphilis all E. Down Thump all W. Soft iv. G. Trim all E. W. Toft i, ii, vi. 1. 5. Walt. Trott all 3, 4, 5. J. Turner all E. and Q. H. Travis, all Q. Lac. Vere but v. Vetus Amicus, Vedaſtus all E. T. Waine 1, ii, iii, vi. Walker i, iii, iv. R. Waring, J. Watts all but v. Mol. Wetenh all E. J. Wilſay all E. H. Williams all E. J. Wilſon ii, vi. Dio Wi liams ii, iii, vi. The firſt Prize fell to Blouſabella, 2d. to Mr. Gibbons, 3d. won by Merones.
